



The Air Force HANDBOOK 2006





America is at war. The United States Air Force is providing air, space, and cyber power as part of a joint warfighting team dedicated to winning the Global War on Terrorism and protecting the interests of the Nation.

Our Air Force is second to none in range and strike power. However, potential adversaries are seeking to limit these advantages by developing new, more powerful weapon systems. These new systems, coupled with the proliferation of weapons of mass destruction, present formidable threats to the Joint Force and to our Nation.

The Air Force systems and equipment described in this handbook represent our response to these threats and our commitment to the security of the Nation. The handbook also describes the Air Force mission and the roadmap designed to achieve this mission. It describes how we will continually transform our forces, leverage the best technology, develop our Airmen, and refine our operational and organizational processes to meet any challenges that our adversaries pose. In addition, it describes the specific systems and capabilities we will use to achieve the Air Force mission.

As you use this information resource, remember that even the most technically advanced systems are of little value without the skilled and dedicated Airmen who, together with Congress and our citizens, will continue to keep our Air Force ready to protect and defend the Nation.

T. Michael Moseley
General, USAF

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This book is designed for clear and easy reference to critical information about Air Force systems.

TITLE: All systems are in alphabetical order.

MISSION: How the system benefits Airmen, combatant commanders, support personnel, and the overall achievement of Air Force strategies


OPERATIONAL ROLES: See detailed explanation below.

CONTRACTORS: A listing of prime and subcontractors

A-10/DA-10 THUNDERBOLT II

MISSION

Provide Close Air Support (CAS) and Forward Air Control (FAC) supporting the ground battle including Special Forces, Combat Search and Rescue (CSAR) and perform interdiction under certain circumstances.



DESCRIPTION

The A-10/DA-10 Thunderbolt II has excellent maneuverability at low air speeds and highly accurate weapons-delivery platforms. Using Night Vision Imaging Systems (NVIS), A-10/DA-10 pilots can conduct their missions during darkness. Thunderbolt II is designed for survivability during close air support and can survive direct hits from armor-piercing and high-explosive projectiles up to 23mm. Sophisticated avionics equipment includes communications, inertial navigation systems, the control and weapons delivery systems, target penetration aids and night vision goggles. Weapons delivery systems include a 30mm GAU-8/A Gatling gun that fires 3,900 rounds a minute. In 2010, A-10s had a mission capable rate of 95.7 percent. Fewer than 100 A-10s are in service. The A-10 has a proven record of destroying targets in Operation Iraqi Freedom.

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STRATEGIC ABILITY

CONTRACTORS

Prime: System Integration, EMD, Production and Sustainment - Lockheed Martin Systems Integration (W)

Subcontractor(s): Integration and Analysis/Structures - Southwest Research Institute (TX); Operational Flight Programs/Avionics - British Aerospace Systems (W)

SPECIFICATIONS

Weight
Range: 51,000 lb. (23,200 kg.)
800 miles (1,287 nautical miles)

Armament

One 30 mm GAU-8/A seven-barrel Gatling gun with over 1750 rounds of ammunition. Up to 16,000 lb. (7,200 kg.) of mixed ordnance on eight under-wing and three under-fuselage pylon stations, including 500 lb. G27s, 1,000 lb. G28s, 2,000 lb. G29s, 100 lb. G32s, 100 lb. G38s, 100 lb. G39s, 100 lb. G40s, 100 lb. G41s, 100 lb. G42s, 100 lb. G43s, 100 lb. G44s, 100 lb. G45s, 100 lb. G46s, 100 lb. G47s, 100 lb. G48s, 100 lb. G49s, 100 lb. G50s, 100 lb. G51s, 100 lb. G52s, 100 lb. G53s, 100 lb. G54s, 100 lb. G55s, 100 lb. G56s, 100 lb. G57s, 100 lb. G58s, 100 lb. G59s, 100 lb. G60s, 100 lb. G61s, 100 lb. G62s, 100 lb. G63s, 100 lb. G64s, 100 lb. G65s, 100 lb. G66s, 100 lb. G67s, 100 lb. G68s, 100 lb. G69s, 100 lb. G70s, 100 lb. G71s, 100 lb. G72s, 100 lb. G73s, 100 lb. G74s, 100 lb. G75s, 100 lb. G76s, 100 lb. G77s, 100 lb. G78s, 100 lb. G79s, 100 lb. G80s, 100 lb. G81s, 100 lb. G82s, 100 lb. G83s, 100 lb. G84s, 100 lb. G85s, 100 lb. G86s, 100 lb. G87s, 100 lb. G88s, 100 lb. G89s, 100 lb. 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Global Mobility

Global challenges demand global responses. Whether they are humanitarian, military, or a mix of both, the Air Force meets these demands with an airlift and tanker fleet that have global reach. Global Mobility provides the capability to move people and equipment across the world quickly, ensuring the right force—anywhere, anytime.

Persistent C4ISR

An accurate picture of the battlespace is critical to understanding and confronting challenges to our national security. Roughly 33 percent of the Air Force budget is dedicated to the sensors that collect imagery, de-conflict air and space assets, listen to adversary communications, enable precise navigation, and develop actionable intelligence. Persistent C4ISR provides the “network” that binds together joint and interagency players, ensuring our Nation’s ability to see first, think first, and act first.

Warfighting Support

Warfighting Support refers to systems that enable the Air Force to provide the key strategic capabilities (Rapid Strike, Global Mobility, Persistent C4ISR) to the Joint Team.

AIR FORCE VISION

Lasting Heritage...Limitless Horizons

More than a century ago, America achieved powered flight, which gave wings to the world along with the vision to imagine the possibilities of air and space power. Soon, military leaders across the globe realized the implications of this development, and warfare was changed forever.

Early Air Force pioneers such as Billy Mitchell and Hap Arnold, who lived in dangerous times and faced many challenges, gave us a proud heritage of courage, innovation, and an unlimited vision for the future that serves us well as we face today's challenges.

THE THREAT—TERRORISM AND BEYOND

America is engaged in a Global War on Terrorism (GWOT), and today's Air Force is playing a critical role in winning that war. Our Airmen serving in Iraq, Afghanistan, and other volatile areas pursue terrorists across steadily shrinking areas of operations, defend our ground forces, and keep our homeland skies clear of threats. More than 23,000 Airmen remain deployed in the Middle East, where they continue to serve proudly.

Elusive and ruthless terrorists are being joined by a growing number of other potential adversaries as they acquire advanced technology. However, these threats are no match for an Air Force whose perspective is strategic and whose effects are global. Nor are they a match for the skillful and dedicated Airmen, Soldiers, Sailors, Marines, Coast Guardsmen, and Federal civilians and contractors who serve in joint operations. Our Airmen fly and fight—whether it's flying an A-10 in Afghanistan, operating a

spacecraft in geosynchronous orbit, controlling Unmanned Aerial Vehicles (UAVs) over Baghdad, or maintaining vigilance over the Homeland in an E-3. All Airmen, no matter their specialty, contribute to this mission.

AIR FORCE MISSION

The mission of the U.S. Air Force is to deliver sovereign options for the defense of the United States of America and its global interests—to fly and fight in the Air, Space, and Cyberspace. To achieve this mission, the Air Force must:

- Prepare for and participate in joint warfighting, anywhere, anytime. This means maintaining a razor-sharp focus on fighting and winning the Global War on Terrorism and responding to the many other threats posed by existing and potential adversaries.
- Develop, maintain, and sustain the warfighter edge, which includes recapitalizing and modernizing our inventory.
- Continue to develop motivated, ethical, accountable Air Force Fighters.

Today's Air Force represents the legacy of a 100-year heritage of flight, of innovative adaptation to constant change, and of the courage and sacrifice of Airmen and their families. What began as a group of daring pilots at the turn of the 20th century, and which evolved into an Army Air Corps pivotal to victory in World War II, is now the world's best Air Force.

OPERATIONAL ENVIRONMENTS ARE CHANGING . . . SO IS THE AIR FORCE

Since the inception of the Air Force on September 18, 1947, our overall mission has remained the same, but operational environments have changed in response to changing threats.



The Airmen of 1947 had just finished winning World War II and the Cold War was beginning. They were tested during the years that followed in the Berlin Airlift, the Korean War, and Vietnam, among other operations.

With the end of the Cold War in the 1980s, the pace of change accelerated as Airmen participated in Operation Desert Storm and allied force and other contingencies across the globe. While we could not predict the future nor avoid its surprises, these operations prepared our Airmen for the Global War on Terrorism.

Operation Desert Storm

- In 1990, after Iraq invaded Kuwait, a coalition force led by the United States determined to restore Kuwait's sovereignty by military force. The ensuing air war and ground attack devastated Iraq's military infrastructure, severed communication and supply lines, smashed weapons arsenals, and destroyed morale.
- The coalition air campaign accumulated a total of 109,876 sorties over the 43-day war, targeting SCUDs, airfields, air defenses, electrical power, biological and chemical weapons, headquarters, intelligence assets, communications, the Iraqi army, and oil refining.
- After a 38-day air campaign, the Desert Sabre ground offensive began with allied forces sweeping through Iraqi defenses. The Iraqi army was crushed after 100 hours.

Operation Northern Watch (ONW)

- For more than a decade, the United States' Combined Task Force (Army, Navy, Marine, Air Force, National Guard, and reserve troops) and its coalition partners defended the no-fly zone above the 36th parallel in Iraq.
- ONW began Jan. 1, 1997, and succeeded another coalition effort, Operation Provide Comfort, which began in April 1991 and delivered more than 12,400 tons of food, supplies, medical aid, and fuel to more than a million Kurdish refugees along the Turkish and Iraqi border.
- The Combined Task Force successfully defended the no-fly zone against Iraqi surface-to-air missiles (SAM), anti-aircraft artillery (AAA) and illumination by radar. Coalition aircraft responded in self-defense to the Iraqi attacks by dropping precision guided munitions on various elements of the Iraqi air defense system.
- Throughout the operation, more than 400,000 sorties were flown in support of ONW.

Operation Southern Watch (OSW)

- OSW was conducted by the Joint Task Force Southwest Asia (JTF-SWA) to monitor and control airspace south of the 33rd parallel in Iraq.
- The operation began following the 1991 Gulf War and ended with the start of Operation Iraqi Freedom in 2003.
- The JTF-SWA successfully defended the no-fly zone against Iraqi SAMs, AAA, and illumination by radar.
- Since its inception, more than 250,000 sorties have been flown in support of OSW without U.S. losses or casualties.

Operation Noble Eagle (ONE)

- The principal mission of ONE is to preserve air sovereignty of the United States and its territories.
- Since September 11, there have been 41,000 fighter, aerial refueling, and airborne early warning sorties.
- Two thousand air patrols respond to actual incidents.

Operation Enduring Freedom (OEF)

- In the first 18 months of OEF, the Air Force flew 85,000 sorties intended to help destroy the Taliban regime and liberate Afghanistan.
- Toppling terrorist-sponsoring regimes is a key Air Force strategy, and it is likely to be a lengthy effort.
- Combat in World War II lasted for 1,347 days. Thus far, our Airmen have been fighting the GWOT for several months longer than we fought World War II.

Operation Iraqi Freedom (OIF)

- Air power has proved itself again over the sands of Iraq in OIF.
- U.S. Air Force sensor-equipped aircraft and munitions devastated six divisions of the Republican Guard, including one, the Medina, through a blinding sandstorm.
- When access problems closed a northern front for our land forces, the Air Force conducted the largest troop airdrop since Operation Just Cause in Panama.
- Almost three years into the operation, the Air Force has flown 30,000 sorties in what has become one of history's most deliberate, disciplined, and precise air campaigns.

In response to six decades of continuous changes in operational environments and threats, the Air Force has applied advanced technology, constant innovation, and education to bring us lethal weapons, unmanned aerial systems, and unmatched surveillance and targeting. What has not changed, however, is the dedication of the Airmen who continue to push the innovation envelope, ensuring success against current and new threats on the horizon.

ROADMAP FOR THE FUTURE

The Air Force has a roadmap for how it must evolve to defend the Nation against current and emerging challenges: joint warfighting, innovative culture, and total force. Our Airmen will continue to be the best providers of air and space power for the Joint Team. We will transform the systems we employ and the way we operate. We will remain a total force that focuses on the most vital component of the Air Force—our Airmen.



JOINT WARFIGHTING

Winning the Global War on Terrorism depends on fighting as a Joint Team. Our Airmen fight above and alongside Soldiers, Sailors, Marines, and Coast Guardsmen. The Air Force controls and exploits air, space, and cyberspace to protect all elements of our Joint and Coalition teams. We protect vital networks from hackers. We operate our space assets to execute quickly and precisely in any theater of operations. We take pride that no manned enemy aircraft has attacked U.S. troops in a combat zone since the Korean War. We will continue our efforts to maintain dominance for the Joint warfight.

The Air Force will be the architect of joint interdependence, unifying and integrating the military services into a powerful, flexible team. As operations in Afghanistan and Iraq have demonstrated, the only way the U.S. military can continue to win is to achieve the full integration of its air, ground, and sea services.

Sister-services and U.S. government agencies continue to rely heavily on Air Force capabilities. From logistics expertise to medical care, the Air Force is fully partnered with the Army and Marine Corps units running convoys throughout Iraq with more than 1,000 transportation, security forces, and medical Airmen trained to support convoy missions.

Additionally, Air Force support personnel are taking a more active role in the direct protection of personnel and resources. In early 2005, Air Force Security Forces at Balad Air Base, Iraq, in conjunction with the Army, were assigned a sector outside the base to patrol and clear of insurgent operations. This aspect of the air base defense mission has not been seen since the Vietnam War, yet Task Force 1041 was successful in reducing attacks on Balad Air Base by 95 percent.

Airmen also worked to strengthen relationships and enhance self-reliance among our allies partnered with us in the Global War on Terrorism. Air Force C-130s air-dropped U.S. Army and Kyrgyz National Guard troops over a drop zone in the capital of Kyrgyzstan during a joint training exercise. While at Ali Airbase, Iraq, a cadre of Air Force instructors taught Iraqi airmen how to fly and maintain their newly acquired C-130 aircraft.

Our Airmen make joint interdependence work. They proudly serve daily alongside Soldiers, Sailors, Marines, and Coast Guardsmen. We fight together. We sacrifice together. Our Airmen have moved from simple deconfliction through integration to true joint interdependence. They engineer and manage the machine-to-machine interfaces that allow the Combined Air Operations Center (CAOC) to command an aircraft to change its target set in mid-mission while satellite guided munitions arrive precisely at an enemy facility. They will continue to tighten the linkages among and between our air, sea, and ground forces. Our Airmen will continue doing what they do best for the Joint Team—dominating air, space and cyberspace.

CULTURE OF INNOVATION

Advanced air, space, and anti-access technologies will make our enemies more capable in the near future. We will face attempts to overcome our advantages in air and space on many fronts. Therefore, winning the war fights of the future will continue to demand a culture of innovation. Airmen share a heritage and culture of adaptation, creativity, and innovation. They understand this need to fight differently, and they keep the Air Force at the forefront of cutting-edge technology so they can do so.

A culture of innovation does not entail just new technology. It continues on the battlefield as Airmen develop new uses for technologies with improved operational concepts. The spirit of innovation can be witnessed in the story of a combat controller on horseback directing air strikes on Taliban positions from a bomber overhead. Innovation is evident in the evolution of precision strike from its origins in an operation to destroy the Thanh Hoa bridge during the Vietnam War with laser-guided bombs, to Unmanned Aerial Vehicles targeting and striking insurgents in Iraq.

TOTAL FORCE INTEGRATION

Another key element in winning today's Global War on Terrorism and whatever challenges tomorrow may bring is the concept of the Total Force. The Air Force's Total Force concept integrates the Air Force Reserve, Air National Guard, and civilian employees with the active duty force to produce greater, more efficient combat capabilities.



The Air Force developed the Total Force concept in full partnership with the Active Duty, Air National Guard and Reserve at the end of Quadrennial Defense Review (QDR) 1997. The vision for Total Force Integration is to maximize Air Force combat capabilities by capitalizing on the strengths inherent in the Air Reserve Component and the increased capabilities of new systems coming on line.

Through the Total Force Integration, the Air Force will realize savings from reducing Active Duty manpower and by retiring our least capable, most expensive to operate weapon systems. This will enable us to modernize weapon systems operated by all three components.

The most valuable resource in the Air Force is our people. Active Duty, civilian, National Guard, Reserve, and select contractors represent the very best—a Total Force. Without this team, the Air Force would be nothing more than technology without purpose and weapons without will.

The Total Force is experienced. Rather than losing large investments in people and training, the Air National Guard and Reserve Command retains the experience of a career in the Active Duty, and ties that experience to modern equipment and new missions. Guardsmen and Reservists bolster the Air Force-wide experience pool and contribute to a more dynamic Total Force. The Air Force embraces the experience of the Guard and Reserve, and is moving advanced technology and equipment directly into the ranks of the Reserve Component.

The Total Force is essential. Coming from different backgrounds and components, the people of the Air Force develop technology and implement concepts of operations.

To ensure these Airmen stay on the cutting edge, the Air Force takes care of its people. Through training, education, and mentoring, the Air Force focuses on developing and cultivating America's most precious assets: its people. The Air Force provides an environment that both challenges and rewards its people. While the Air Force demands the best from our Airmen, they in turn can expect the best from their Air Force.

REALIZING THE VISION

We have the finest Air Force we have ever had, but we are going to be even better. To do so will require bold new initiatives. The implementation of the following dramatic ideas will further develop our rich heritage and push the Air Force beyond the horizon of today into a bold new future:

DEFEND AND PROTECT

We will continue to defend and protect our service by respecting and remembering our heritage, our ethos, and the USAF core values that are the foundation of our culture as Airmen. This is what we are all about: Integrity First, Service Before Self and Excellence in All We Do.

RECRUIT, DEVELOP, AND RETAIN

We will continue to recruit, develop, and retain the best people. We truly have the best people, and we will give them the best opportunities for career development, training, and standard of living. We will recommit to composite force training. We will get the right number of Airmen into the right number of jobs.

Our Airmen are more accustomed to “hot” wars than the Cold War. We honor those Airmen who are fighting now and those who fought before us as we prepare the next generation of Airmen who will fight after us. We will be a force of warriors, always remembering that when called upon, we are ready to fly and fight.

RECAPITALIZE AND MODERNIZE

As warfighters, our Airmen merit the best weapons and equipment so that they can continue to do what they do best—fly and fight for the Joint Team. We have an aggressive yet balanced plan to recapitalize our aging weapon systems. These include recapitalizing our aging fighter, mobility, tanker, search and rescue, and special operations platforms.

TRANSFORM OUR ORGANIZATIONS

The Air Force will continue total force integration to yield positive efficiencies and effects for our Airmen and the Joint Team. Recognizing the new reality of rapidly emerging global threats, the Air Force led the services in moving from its legacy Cold War structure to the Air Expeditionary Force (AEF). The AEF construct provides the agility to engage U.S. adversaries anywhere in the world with correctly tailored forces in a matter of hours to single digit days.

We will continue to refine the AEF system and how airpower is presented by Airmen to combatant commanders. We will review how new warfighting headquarters are equipped and organized.



EXPAND OUR LEADING ROLE IN CYBERSPACE

The Air Force will expand upon our leading role in cyberspace. The Air Force initiated a Cyberspace Task Force to lead its Airmen to victory on the digital battlefield. This will afford us offensive capabilities and deliberate target sets, and will be at the vanguard of protecting the Nation from an electronic “Pearl Harbor.”

Joint warfighters need keen eyes and ears—our Airmen provide them in the form of Persistent C4ISR—Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance. Our Airmen provide an integrated picture of air, space, and cyberspace for the Joint Team. Airmen track terrorist assets and monitor trouble spots around the globe. We have aircraft overhead, missiles on alert, and Airmen always at the ready.

MAINTAIN OUR SPIRIT OF INNOVATION

Achieving our mission means adapting to change. More than 100 years of flight have been marked by constant change. The very concept of an Air Force required innovation. This is why the Air Force culture embraces change—it is in our very nature. Innovation is key to our legacy and to our future as Airmen. As we move forward, we will maintain our spirit of innovation and continually nurture our culture of change and experimentation. We are willing to challenge precedent, history, and convention.

FROM PROUD AND LASTING HERITAGE TO A LIMITLESS HORIZON

Since September 18, 1947, courageous men and women have proudly taken on the title of Airman and the great responsibility that comes with it—projecting air and space power for America. Wars have been won, lives have been saved, and freedom has reigned because of air power. Although the operational environment will change as the nature of the threats change, our determination, commitment, and sheer drive to stand up and fight for freedom and the ideals our Nation holds dear have not wavered. Our Airmen always will be there to answer the Nation's call. Behind us stands a proud and lasting heritage; before us lies a limitless horizon.





LONG RANGE Strategic Priorities

EMERGING THREATS

The threat landscape that Airmen encounter in the coming years will be dramatically different from today's. Adversaries are developing and fielding new ground-based air defenses, surface-to-air missiles (SAMs), improved sensor capabilities, and advanced fighter aircraft. These capabilities will increasingly challenge the Air Force's legacy aircraft, sensors, and weapons systems. Moreover, many nations are refurbishing and upgrading older equipment with state-of-the-art technologies, making advanced threat systems affordable to more potential adversaries of the United States.

SAM systems are incorporating faster, more accurate missiles, with multi-target capability, greater mobility, and increased immunity to electronic jamming. With ranges approaching 200 nautical miles by the end of this decade, advanced SAMs can force non-stealthy U.S. platforms to stand off beyond useful sensor and weapons ranges.

In addition, 1960s/1970s-era SAMs are being upgraded by many African, Asian, and Middle Eastern nations to revitalize their aging air defense forces. Finally, the threat from Man Portable Air Defense Systems (MANPADS) continues to grow. Around the world, large, poorly secured stockpiles increase the chances of a highly capable MANPADS ending up in the hands of insurgent or terrorist groups.

The threat from advanced fighter aircraft continues to grow with 31 nations already fielding nearly 2,600 airframes. Increased use of state-of-the-art radar jammers, avionics, weapons, and reduced signature airframes/engines are becoming the norm in fighter design. The threat from the development, fielding, and proliferation of standoff weapons such as long-range cruise missiles will also provide potential

adversaries with offensive capabilities of ever-increasing accuracy and range that, when combined with their relatively small size, present an increasing challenge to detection and tracking.

Many nations are enhancing the utility of advanced fighters by procuring force multipliers. Aerial refueling tankers are becoming standard acquisitions in efforts to extend the range of strike operations and increase on-station time for fighters. Also extending the reach of many nations are airborne early warning aircraft with data link capability that provides control of fighter operations well beyond the reach of land-based radars. Several nations are also purchasing standoff jamming assets in both manned and unmanned platforms to diminish traditional U.S. sensor advantages.

Unmanned Aerial Vehicles (UAVs) of all varieties are available and sought after in order to provide nations with highly effective reconnaissance capabilities. As UAV technology progresses, adversaries will likely pursue a nascent strike capability as well. Taken together, these technologies provide a formidable threat to U.S. air dominance.

Additionally, regional basing for the Air Force will increasingly be at risk from a combination of improved Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) and emerging ballistic and cruise missile capabilities.

Worldwide advancements in the development, deployment, and employment of foreign space and counterspace systems are challenging U.S. space superiority. Adversaries, including terrorists, are obtaining a number of space services as well as developing the means to degrade U.S. space access. Their intentions, combined with the capabilities of foreign space and counter space systems, will increasingly threaten U.S. military forces and interests worldwide.

WEAPONS OF MASS DESTRUCTION (WMD) PROLIFERATION

The threat of proliferation of WMD to countries with advanced military capabilities has changed dramatically since the end of the Cold War. India and Pakistan became overt nuclear powers in 1998, adding to their formidable conventional capabilities. Israel neither confirms nor denies a nuclear capability and is widely assessed to have a large stockpile.

North Korea claims to have nuclear weapons and is assessed as capable of having built at least one or two, while Iran is suspected of pursuing them; both countries face intense international pressure to renounce their efforts. While most countries seem willing to abide by the Nuclear Nonproliferation Treaty, even a limited amount of proliferation poses a threat, since it may prompt technologically capable neighbors to pursue their own nuclear capability in response, thereby increasing regional instability.

Less catastrophic, but of equal concern, are chemical and biological weapons (CBW). CBW can range in sophistication from World War I-vintage gases or traditional agents like anthrax, to highly advanced “fourth-generation” chemical agents or genetically modified bacterial or viral weapons that challenge state-of-the-art defense and countermeasures. It is cheaper and more technologically feasible to produce CBW than it is to obtain nuclear weapons, and CBW can be concealed within legitimate civilian industry or “dual-use” activity.

Future adversaries, deterred from challenging the United States openly, may seek to offset the overwhelming U.S. warfighting advantage by developing and using or threatening to use these weapons asymmetrically. As such, the acquisition of WMD capabilities by terrorists/non-state actors remains a serious concern. Many groups have declared their desire to pursue such a goal, and evidence is growing that they are attempting to obtain the necessary knowledge and materials.

AIR AND SPACE POWER—AN ESSENTIAL ELEMENT OF THE JOINT FIGHT

U.S. military performance during ongoing operations in Iraq and Afghanistan demonstrates unprecedented joint interdependence. The Air Force has gone from struggling to deconflict air and ground forces on the battlefields of Operation Desert Storm to demonstrating a high degree of integration among those forces during Operation Iraqi Freedom. The Air Force has not, however, completed the transformation. The Joint Force must achieve even greater integration in future operations to take full advantage of joint interdependencies.

The Air Force is a linchpin of the future, interdependent Joint Force. As ground forces seek to increase their agility and speed, they will rely ever more on air and space power to move them throughout the battle space, provide the information needed to outmaneuver numerically superior or elusive adversaries, and deliver precise, rapid strikes across multiple, distributed operations areas. As the Joint Force explores the future concept of sea-basing as another means to project and support ground forces, the requirements also increase for land-based air and space power.

BATTLEFIELD AIRMEN

Today's Airmen are engaged beyond the airbase “outside the wire,” bringing technology to warfighting on the ground using advanced systems to designate targets, control aircraft, rescue personnel, and gather vital meteorological data. The Air Force is optimizing this family of specialties, known as Battlefield Airmen. So far, it has identified program management, acquisition, and sustainment synergies across the Combat Rescue, Combat Control, Terminal Attack Control, and Special Operations Weather functional areas. Since Air Force personnel are an integral part of the battlespace, the Air Force is also identifying common training requirements for these Airmen.

Battlefield Airmen will be organized for maximum effectiveness in the modern battle space. They will be trained in the skills required to maximize airpower; the training will be standardized across the various Battlefield Airmen specialties. Finally, Battlefield Airmen will be armed with improved and standardized equipment for missions in the forward and deep battle space. This will expand the commander's ability to employ battlefield airpower experts who can introduce unequaled accuracy, responsiveness, flexibility, and persistence into designated air operations.

Joint Terminal Attack Controllers (JTACs), a subset of Battlefield Airmen, direct the action of combat aircraft engaged in close air support and other offensive air operations from a forward position. For the first time, JTACs will be recognized across the Department of Defense as capable and authorized to perform terminal attack control in accordance with a joint standard. In addition to night vision equipment, JTACs carry a hardened laptop computer and multi-channel radio.

The Air Force has reduced the weight carried by Battlefield Airmen while simultaneously providing them with the ability to perform activities such as designating targets several kilometers away. The Air Force aims to further decrease the weight of the Airmen's gear while increasing the capabilities and interoperability of their equipment with other air, space, and ground assets. The equipment will increase situational awareness, assist in combat identification, maximize first-attack success, shorten the kill-chain, and provide better support to ground forces.

INNOVATIVE USES OF TECHNOLOGY

Innovation is critical to success on the battlefield as well as the home front. Each day, Airmen across the world produce military effects for the Joint Team through innovation coupled with technology.

To meet Central Command's (CENTCOM's) urgent operational needs, the Air Force is accelerating the modification of the Sniper and LITENING Advanced Targeting Pods (ATPs) with video datalink transmitters to share information more rapidly. The high resolution images from targeting pod television and infrared video is generations better than the older Low Altitude Navigation and Targeting Infrared for Night (LANTIRN) pods used during previous conflicts, and they provide orders of magnitude more relevant tactical information.

The Air Force is quickly adapting new tactics, techniques, and procedures for integrating the ROVER III and ATPs into Non-Traditional Intelligence Surveillance and Reconnaissance (NTISR) missions. These include convoy escort, raid support, and infrastructure protection missions, as well as traditional Close Air Support (CAS) missions. Equipped with air-ground weapons, these aircraft have the flexibility to provide responsive firepower and make fighters and bombers more effective than ever.

Further, some ROVER IIIs were diverted to support disaster relief and humanitarian assistance in the aftermath of Hurricanes Katrina and Rita. Instead of fighter or bomber aircraft flying with ATPs, video transmitters were located on rooftops or attached to helicopter landing skids to provide video streams to recovery teams equipped with ROVER IIIIs.

Predator UAV systems continue to demonstrate innovative applications of technology for fighting the Global War on Terrorism. Current operations allow Airmen in Nevada to pilot and control the Predators operating in the Iraq and Afghanistan theaters of operations. These flight and mission control operations are the result of revolutionary advances in the execution of military capability.

Equipped with an electro-optical, infrared, and laser designator sensor, and armed with Hellfire missiles, Predator has not only shortened the sensor-to-shooter timeline—it has allowed the sensor to *become* the shooter. In 2005, the Predator flew more than 30,000 flight hours, over 80 percent of which were in direct support of combat operations. In August 2005, the Predator program flew four aircraft controlled by a single pilot and ground control station, successfully demonstrating the Multiple Aircraft Control (MAC) concept.

By contrast, the Global Hawk high-altitude, long-endurance, Remotely Piloted Aircraft (RPA) has demonstrated innovative uses of synthetic aperture radar and electro-optical and infrared sensors, providing persistent surveillance and reconnaissance capabilities in day, night, and adverse weather conditions. Global Hawk can survey large geographic areas or collect information on spot targets, providing military decision-makers with the most current information about enemy location, resources, and personnel. The Global Hawk program is delivering production systems to the warfighter now and is in constant demand by combatant commanders. Since its first flight in 1998, Global Hawk has flown more than 7,800 hours—including 222 combat missions—while deployed in support of the GWOT and achieved more than a 90 percent success rate in capturing images.

The long established ISR stalwart, the RC-135 continues to demonstrate its adaptability to a changing and evolving threat environment with the application of progressive technologies and upgrade programs. The RC-135 RIVET JOINT continues to field improvements in tactical SIGINT capabilities and platform performance, including re-engining and avionics modernization, to support the full spectrum of combat operations and national information needs. Additionally, RIVET JOINT has become the cornerstone for airborne net-centric development. RIVET JOINT plays a key role in the Network-Centric Collaborative Targeting Advanced Concept Technology Demonstration and serves as the platform of choice for implementation of new reachback technologies to enhance national and tactical integration. Adding yet another chapter to RIVET JOINT's continuous record of support to CENTCOM since 1990, the platform flew over 550 airborne reconnaissance missions in support of OEF and OIF.

ADAPTIVE AIRMEN: AIRMEN FILLING NON-TRADITIONAL ROLES

Currently, Air Force Security Forces are filling CENTCOM shortfalls in several non-traditional roles such as convoy support, detainee operations, protective service details, law and order detachments, military transition teams, and provincial reconstitution teams.

Convoy support is provided in the form of heavy weapons teams that support long-haul convoy operations. These Airmen attend heavy weapons training followed by a convoy training course. From that training platform, Airmen deploy forward to support theater operations. Detainee operations are the most heavily supported mission. Airmen attend training at Fort Lewis, WA, or Fort Dix, NJ, where they learn the fundamentals of detainee operations. The Airmen are then deployed to the detainee facility in theater to receive additional on-site training.

Law and order detachments support missions throughout the area of operations. This mission is the closest to a traditional security forces role. In this capacity, security forces personnel provide garrison law enforcement and security. Occasionally, these missions will support non-routine operations outside the confines of an installation.

Military Transition Teams (MTTs) are specially trained personnel who work within the organizations of indigenous forces. They are responsible for training these forces to support and sustain themselves without the assistance of advisors. Provincial Reconstitution Teams (PRTs) are organizations that move into a different region within the area of operations and provide additional support, training, and sustainment. For security forces, this mission is smaller than the MTT mission.

With the exception of the law and order detachments, none of these missions falls within the core competencies of Air Force Security Forces. They require anywhere from 30 to 60 days of training and off-installation time in addition to a 179-day deployment.

AIR AND SPACE POWER FOR TOMORROW— AIMING FOR THE UNLIMITED HORIZON

FORCE SHAPING

For the past 18 months, the Air Force reduced Active Duty end-strength to Congressionally authorized levels while shaping it to relieve some of the most stressed career fields. The 2004-2005 Force Shaping Program allowed officers and enlisted personnel to separate earlier than they would have in order to reduce excess end-strength. In addition to the voluntary force shaping measures, the Air Force significantly reduced enlisted accessions in 2005 to help meet the Congressional mandate.

While the Air Force met its 2005 end-strength requirement, it began 2006 with a force imbalance: under-strength in enlisted personnel and over-strength in officer personnel, principally among officers commissioned between 2000 and 2004.

This force imbalance created several unacceptable operational and monetary impacts. Consequently, the Air Force took several actions to ensure that its force is of the correct size and shape to meet future challenges and to reduce unprogrammed salary costs.

First, the Air Force increased enlisted accession targets for 2006 to 30,750 to address the enlisted imbalance. Second, it continued to encourage qualified officers, especially those commissioned in 2000 and later, to consider voluntary options for service in the Air National Guard, Air Force Reserve, and civil service or inter-service transfer to the Army.

In addition, the Air Force is institutionalizing the force-shaping authority granted in the 2005 National Defense Authorization Act to restructure its junior officer force. Only after exhausting all efforts to reduce officer end-strength by voluntary means will the Air Force convene a Force Shaping Board in April 2006 to consider the performance and potential of all eligible officers commissioned in 2002 and 2003. This board will be held annually thereafter to properly shape and manage the officer corps to meet the emerging needs of the Air Force.

TOTAL FORCE INTEGRATION (TFI)

One of the Air Force's more significant commitments to long-term transformation is the creation of the Directorate of Total Force Integration (TFI). This new directorate is responsible for future force structure, emerging-mission bed down, and development of TFI organizational constructs. Working with the Air National Guard and Air Force Reserve, the Air Force is maximizing overall joint combat capability to enable it to meet the challenges of a shrinking budget, an aging aircraft fleet, and new and emerging missions.

The Air Force plans to shift investment from "traditional" combat forces, with single-mission capabilities, to multi-role forces by aggressively divesting itself of older systems. The result will be a force structure with expanded capability to combat conventional threats while continuing to wage the GWOT. The Air Force will become a smaller yet more capable force through recapitalization and modernization of selected weapon systems with a commitment to networked and integrated joint systems.

Air National Guard and Air Force Reserve members will continue to support the Air Force's global commitments and conduct vital homeland defense and security missions. TFI seeks to integrate Air Force components into missions critical to current and future warfighting: ISR, UAV, and space operations. These missions are ideally suited for the Guard and Reserve since many provide direct support to the joint warfighter from U.S. locations. Using this approach will improve operational effectiveness, reduce the Air Force's overseas footprint, reduce reliance on involuntary mobilization, and provide more stability for Airmen and their civilian employers.

from U.S. locations. Using this approach will improve operational effectiveness, reduce the Air Force's overseas footprint, reduce reliance on involuntary mobilization, and provide more stability for Airmen and their civilian employers.

TFI benefits from a robust, dynamic, cross-functional coordination process, involving the headquarters, all active duty MAJCOMs, the National Guard Bureau, and the Air Force Reserve Command. The Air Force continues to make significant progress on initiatives such as the Richmond-Langley F-22A integration in Virginia; community basing in Vermont; F-16 Integration at Hill AFB, Utah; Air National Guard Predator missions in various states, and at the Air Force Warfare Center in Nevada; and C-17 associate units in Alaska and Hawaii. Additional initiatives include C-130 Active Associate units in Colorado and Wyoming; a C-5 Flight Training Unit in Texas; C-40 Integration in Illinois; and Centralized Intermediate Repair Facilities in Illinois, Connecticut, Louisiana, Utah, South Carolina, Georgia, North Carolina, and Florida.

AIR FORCE COMPONENT HEADQUARTERS (AFCHQ)

The Air Force is transforming its command and control structure by establishing new, globally positioned AFCHQs, and replacing older Cold War structures to provide the Joint Force Commander (JFC) with the most effective means to command and control air and space forces in support of national security objectives. These forces will be organized and resourced to plan and deliver air and space power in support of combatant commanders, enabling a seamless transition from peacetime to wartime operations. Maximum use of C4ISR technology and reachback will be used to optimize required manpower. The AFCHQs are also designed to act as the Combined/Joint Force Air Component Commander Headquarters, or Joint Task Force Headquarters.

JOINT WARFIGHTING SPACE (JWS)

The JWS is an operational concept for how the Air Force will use Operationally Responsive Space (ORS) capabilities to rapidly deploy and employ communication, ISR, and other space capabilities. JWS will emphasize agility, decisiveness, and integration to provide dedicated, responsive space and near-space capabilities and effects to the JFC.

In 2005, the Air Force successfully conducted the first JWS demonstrations. By capitalizing on existing commercial communications capability using free-floating platforms, the Air Force was able to extend line-of-sight communications for ground forces from five to seven miles to over 300 miles. This demonstration was the initial step in exploiting existing off-the-shelf technologies in the long loiter environment.

In 2006, the Air Force will team with its sister Services to conduct the first in a series of small (~1000 pounds) satellite experiments. These demonstrations are designed to enhance and incorporate space capabilities in joint training and exercises, increase space integration, and enable the JFC to take advantage of the many synergies

provided by multi-service space professionals. Lessons learned from this activity will potentially initiate changes to space doctrine and help the joint community to develop innovative space-derived effects.

JWS and ORS demonstrations will continue to explore ways of achieving new, more effective ways of providing space capabilities to the joint warfighter. As technologies mature, JWS will bring the JFC more persistent, responsive, and dedicated capabilities.

LONG RANGE STRIKE

To further refine its rapid strike capabilities, the Air Force is transitioning its long-range strike strategy to focus on effects instead of platforms. Long-range strike is the capability to achieve desired effects rapidly and persistently on any target set in any operational environment.

The Air Force is responsible for conducting long-range strike missions as part of the Global Strike Concept of Operations (CONOPs). Today, the Air Force provides deep strike capabilities through a variety of platforms and weapons. Future capabilities must continue to enhance the effectiveness of the system. Responsive capabilities combine speed and stealth with payload to strike hardened, deeply buried, or mobile targets, deep in enemy territory, in adverse weather, with survivable persistence in the battle space.



The mission of the U.S. Air Force is clear. As threats change and America's interests evolve, the Air Force will continue to adapt and evolve. It will remain the world's premier air and space force. Together with its fellow Services, it stands resolute, committed to defending the United States and defeating America's enemies.





2005 AIR FORCE Crisis and Combat Actions

The Air Force is deployed around the world in support of the Global War on Terrorism and other critical operations. In Operations Enduring Freedom (OEF) and Iraqi Freedom (OIF), the Air Force has flown more than 318,000 sorties, or approximately 78 percent of the total coalition air effort. Aviation missions ranged from airlift and aeromedical evacuation, to close air support. During combat missions in 2005, Air Force fighters and bombers delivered 218 munitions (bombs), 90 percent of which were precision-guided, such as the Joint Direct Attack Munition (JDAM). This represents a 10 percent increase over 2004 in the use of guided munitions. The Airmen of the Air Force have also provided nearly all of the in-flight refueling for the Joint and Coalition Forces.

Reconnaissance and Imagery. Leading the way in reconnaissance and imagery, the Air Force is currently flying Predator UAV missions 24 hours a day, 7 days a week. This capability will increase from 8 to 12 total orbits in 2005 to meet growing requirements. Predator aircraft are able to transmit live video pictures to ground-based targeting teams equipped with the Remote Operations Video Enhanced Receiver (ROVER) system. Linking precision engagement and persistent Command, Control, Computers, Communications, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities to forces on the ground, ROVER has been used repeatedly to detect, target, and destroy improvised explosive devices (IEDs) and disrupt other insurgent activities across the region. Bolstering these capabilities are Theater Airborne Reconnaissance System (TARS)-equipped F-16s flown by Air National Guard units. In recent testing, TARS has demonstrated the ability to detect possible IED emplacement through the identification of anomalies over time using change detection methodologies.

UNIFIED ASSISTANCE

Overview

- On December 26, 2004, a magnitude 9.0 earthquake struck deep under the Indian Ocean off the west coast of Sumatra, triggering a massive tsunami that destroyed villages and resorts in six countries across southern and Southeast Asian coastlines. More than 150,000 deaths were reported.
- Operation Unified Assistance was a humanitarian operation effort to provide relief assistance in the wake of the devastating tsunamis.
- The U.S. military provided logistical support and delivered supplies to the survivors, working closely with many other nations and the United Nations.

U.S. Air Force Operations

- Air Force aircraft (C-130s, KC-135s) flowed into the theater carrying millions of pounds of relief supplies and providing a hub for operations and coordination.
- By the end of the first two weeks, Air Force aircraft and aircrews had delivered more than 1.66 million pounds of cargo and 748 passengers supporting tsunami relief operations.
- More than 434 humanitarian airlift missions were flown, the largest humanitarian airlift mission since the Berlin Airlift of 1948.

U.S. Air Force Air Assets

U.S. Air Force air assets used in this operation included the following:

- C-130E: 7 Aircraft (4 from 517th Airlift Squadron in Alaska)
- HH-60: 10 (Kadena AB moved forward on airlift to Colombo)
- HH-60: 10 (U.S. Forces Korea aeromedical evacuation helicopters)
- KC-135: Air transport and air refueling
- C-17 and C-5 aircraft provide inter-theater airlift support
- Tanker Airlift Control Element capabilities (TALCE): being set up at five locations throughout the region to transport relief supplies, people, and equipment.
- Joint Collection and Observation System (JCOMS): VTC equipment delivered to Utapao, Phuket, and Sri Lanka





OPERATION ENDURING FREEDOM (OEF)

Overview

- OEF began on October 7, 2001. Since then, the Air Force team—Active Duty, Guard, Reserve—has flown more than 129,888 sorties.
- Air Force bombers, fighters, airlifters, tankers and ISR assets remain in action daily.

U.S. and Coalition Operations

- USAF B-1s, B-2s, B-52s, F-15Es, F-16s, A-10s, and AC-130s have flown more than 75 percent of all OEF combat missions in Afghanistan, dropping more than 30,750 munitions—9,650 tons.
- Throughout combat operations in Afghanistan, the Air Force has flown more than 48,000 airlift missions. These missions have moved more than 513,026 passengers and more than 487,000 tons of cargo from the United States to the Afghan theater of operations.
- The Air Force continues to provide full spectrum air and space support. In Afghanistan and Iraq, tankers have flown more than 17,050 refueling missions supporting aircraft from all services.
- Aircraft providing ISR data, such as JSTARS, UAVs, Rivet Joint, U-2, AWACS, and Commando SOLO, have flown more than 28,000 sorties since the beginning of the operation.

OPERATION IRAQI FREEDOM

Overview

- United States OIF remains an essential part of the Global War on Terrorism (GWOT).
- The United States continues to assist the developing Iraqi Army to battle occasional insurgent attacks that aim to undermine the fledgling Iraqi democracy.
- The U.S., coalition partners, and the Iraqi military will continue to defeat these insurgents and help Iraq secure its democracy.

U.S. and Coalition Operations

- Combined operations have been the hallmark of operations in both Afghanistan and Iraq. High levels of cooperation and coordination of air power assets have enabled the Air Force to provide rapid response times to commanders in the theater.
- The coalition air campaign has been the most deliberate, disciplined, and precise air campaign in history. Since March 2003, the Air Force has flown over 200,000 sorties.
- Air Force aircraft have flown 5,700 airlift sorties in support of OIF, moving more than 55,000 passengers and more than 40,000 tons of cargo.
- The Air Force continues to provide full spectrum air and space support for both Operation Enduring Freedom (OEF) and OIF. Tankers have flown more than 17,050 refueling missions supporting aircraft from all Services.
- ISR assets, including JSTARS, UAVs, Rivet Joint, U-2, AWACS, and Commando SOLO, have flown more than 3,025 missions to provide persistent battlefield awareness.
- America's unparalleled space-based capabilities have given the Joint Team the winning edge in navigation and timing, missile warnings, intelligence, surveillance, reconnaissance, and global communication in OIF and the GWOT.





OPERATION JOINT GUARDIAN

Overview

- Since June 11, 1999, the United States European Command has provided U.S. forces and logistical support to Operation Joint Guardian, the NATO-led peacekeeping operation in Kosovo.
- The NATO-led Kosovo Force (KFOR) currently includes forces from the United States, Great Britain, France, Germany, Italy, the Czech Republic, the Netherlands, Spain, Poland, Greece, Turkey, Russia, Canada, and Ukraine.
- The United States is committed to supporting peace and stability in Kosovo by implementing the Military Technical Agreement and participating in the NATO-led military force.

U.S. Forces

- The United States agreed to provide a force of approximately 7,000 U.S. personnel as part of the NATO KFOR, providing the headquarters and troops for one of the five NATO sectors.
- The United States also provides personnel, units and equipment to other components of the KFOR organization. The U.S. sector (Multinational Brigade East) is in southeast Kosovo. Headquarters for U.S. forces is located at Camp Bondsteel, near Uroseciv.



OPERATION JOINT FORCE

Overview

- Since December 1995, the United States European Command has provided forces in support of NATO-led operations in Bosnia-Herzegovina headed by NATO.
- The United States remains committed to supporting peace in Bosnia-Herzegovina by implementing the Dayton Peace Accords and participating in the NATO-led military force.

U.S. Forces

- From a total of almost 20,000 troops at the height of NATO's Bosnia operations in 1996, U.S. troop levels have steadily decreased as progress continues under the Dayton Peace Accords.
- The United States agreed to provide a force of approximately 6,900 U.S. personnel to help maintain a capable military force in Bosnia-Herzegovina.
- The United States supports the NATO Stabilization Force (SFOR) by providing the headquarters and most of the troops for one of the three NATO-led multinational divisions.
- The United States also provides personnel, units, and equipment to various parts of the SFOR organization.
- The majority of the U.S. forces are in northeast Bosnia, in the Multinational Division North (MND-N) sector, with sector headquarters is at Tuzla, Bosnia.



HURRICANE KATRINA

- Air Force hurricane relief efforts represent the largest-ever peacetime air operation on U.S. soil with respect to people moved and sorties flown. Air Force medical teams treated more than 20,000 people and air-evacuated more than 2,600. Air Force crews conducted the largest search and rescue operation since Vietnam.
- The Air Force deployed a Global Broadcast Service Theater Injection Point to Louis Armstrong International Airport (IAP) and 10 user terminals to Camp Shelby, HQ JTF Katrina. The Air Force took surveillance video from reconnaissance aircraft circling above the disaster areas, uplinked it to on-orbit satellites, and then re-broadcast the video to the appropriate military and civilian authorities in the affected region.
- The Air Force Civil Engineer Support Agency, Tyndall AFB, Florida, managed approximately \$35 million in contingency response services through a unique procurement contract called the Air Force Augmentation Program. This allows the agency to quickly provide contracted support during contingency operations, humanitarian operations, and operations other than war.
- The Civil Air Patrol (CAP) had about 176 members on the ground in Mississippi conducting door-to-door searches of homes to ensure victims had adequate food and water, and to address any other needs. CAP volunteers checked on residents in thousands of homes in Hancock, Jackson, Stone, and Pearl River counties.
- The 823rd Red Horse Squadron from Hurlburt (9AF Unit) cleared 31,000 tons of industrial/housing debris during its deployment, helped out at Louis Armstrong IAP in New Orleans, and was responsible for most of the clean up at Kessler AFB.

HURRICANE RITA

- Total Air Force teams of Active, Guard, and Reserve Airmen went into action before Hurricane Rita made landfall, evacuating more than 4,000 elderly and ill citizens. As the Airmen flew inbound, they carried water and Meals Ready to Eat (MREs).
- Air Force air traffic controllers replaced evacuating civilian controllers to keep Houston airspace open as long as possible. Quick response forces, mobility aircraft, rescue teams, and hundreds of Airmen from more than 15 bases across the continental United States stood on alert and engaged throughout the region as needed, while intelligence, surveillance, and reconnaissance aircraft continued collecting images for state and federal authorities to use as action plans were drafted and executed.
- Air Force Reserve “Hurricane Hunters” flew into Rita as the storm approached the coast to provide the most up-to-date information on weather conditions and forecasts. Meanwhile, Airmen from Ellington Field in Houston distributed more than 800 gallons of diesel fuel to evacuation buses, and CAP and SAR units began damage assessment and rescue flights following Rita’s landfall.





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MISSION

Provide Close Air Support (CAS) and Forward Air Control (FAC) supporting the ground battle including Special Forces; perform Combat Search and Rescue (CSAR) and interdiction under certain circumstances.



DESCRIPTION

The A-10/OA-10 Thunderbolt II has excellent maneuverability at low air speeds and is a highly accurate weapons delivery platform. Using Night Vision Imaging Systems (NVIS), A-10/OA-10 pilots can conduct their missions during darkness. Thunderbolt IIs are designed for survivability during close air support and can survive direct hits from armor-piercing and high-explosive projectiles up to 23mm. Sophisticated avionics equipment includes communications, inertial navigation systems with embedded GPS capability, fire control and weapons delivery systems, target penetration aids, and night vision goggles. Weapons delivery systems include a 30mm GAU-8/A Gatling gun that fires 3,900 rounds per minute. In the Gulf War, A-10s had a mission capable rate of 95.7 percent, flew 8,100 sorties, and launched 90 percent of the AGM-65 Maverick missiles used. These aircraft were responsible for 60 percent of Air Force fighter-destroyed targets in Operation Iraqi Freedom (OIF). All A-10s are being upgraded to A/OA-10C models by incorporation of the Precision Engagement modification, which extends through FY09. This modification integrates the A-10 avionics systems with a digital data link and a targeting pod. Other added capabilities include Joint Direct Attack Munition (JDAM) and Wind Corrected Munitions Dispenser (WCMD) weapons employment, a MIL-STD-1760 data bus, a digital stores management system, and Hands On Throttle And Stick (HOTAS) controls.



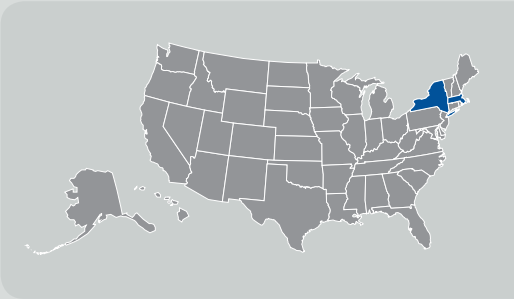
CONTRACTORS

Prime: System Integration, EMD,
Production and Sustainment

- Lockheed Martin Systems
Integration (NY)

Subcontractor(s): Propulsion

- General Electric (MA); **Integration
and Analysis/Structures** - Northrop
Grumman (NY)



SPECIFICATIONS

Weight	51,000 lb. (22,950 kg)
Range	800 miles (695 nautical miles)
Armament	One 30 mm GAU-8/A seven-barrel Gatling gun with over 1,150 rounds of ammunition. Up to 16,000 lb. (7,200 kg) of mixed ordnance on eight under-wing and three under-fuselage pylon stations, including 500 lb. (225 kg) Mk-82 and 2,000 lb. (900 kg) Mk-84 series low/high drag bombs, GBU-31/32/38 Joint Direct Attack Munitions, incendiary cluster bombs, combined effects munitions, Wind Corrected Munitions Dispensers, mine dispensing munitions, AGM-65 Maverick missiles and laser-guided/electro-optically guided bombs; infrared countermeasure flares; electronic countermeasure chaff; jammer pods; 2.75-in. (6.99 cm) rockets; illumination flares; and AIM-9 Sidewinder missiles.
Dimensions	Length: 53 ft., 4 in. (16.16 m); Height: 14 ft., 8 in. (4.42 m); Wingspan: 57 ft., 6 in. (17.42 m)
Power Plant	Two General Electric TF34-GE-100 turbofans
Thrust	9,065 lb. each engine
Speed	450 miles per hour (Mach 0.75)
Ceiling	45,000 ft. (13,636 m)
Crew	One

ACQUISITION STATUS

Program Status	Modification and sustainment; projected inventory—356
Unit Assignment	Worldwide
Current Inventory	356 (58 percent Active, 14 percent Air Force Reserve Command (AFRC), 28 percent Air National Guard (ANG))
Future Upgrades	Precision Engagement (PE) Spiral 2, Extended Infrared CounterMeasures (IRCM), Situational Awareness Data Link (SADL), Wing Replacement Program, and Mode S/5. The Propulsion Upgrade Program (PUP) plans to enter Systems Design and Demonstration (SDD) phase in FY06.

MISSION

Provide close air support, air interdiction, and armed reconnaissance.



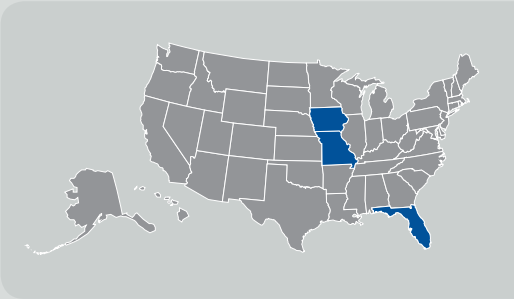
DESCRIPTION

The AC-130H Spectre provides close air support, air interdiction, and armed reconnaissance. Other missions include perimeter and point defense, escort, landing, drop and extraction zone support, forward air control, limited command and control, and combat search and rescue.



CONTRACTORS

Prime: Airframe - Lockheed Martin (FL); Weapon System Support - Boeing (FL); Radar - SEI (MO); Communications/Navigations - Rockwell Collins (IA)



SPECIFICATIONS

Weight	155,000 lb. (gross weight)
Range	1,300 nautical miles (NM); unlimited with in-flight refueling
Armament	40 mm Bofors Cannon; 105 mm Howitzer
Dimensions	Wingspan: 132 ft.; Length: 99 ft.; Height: 38 ft.

ACQUISITION STATUS

Program Status	Modifications only
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MISSION

Provide close air support, air interdiction, and armed reconnaissance.



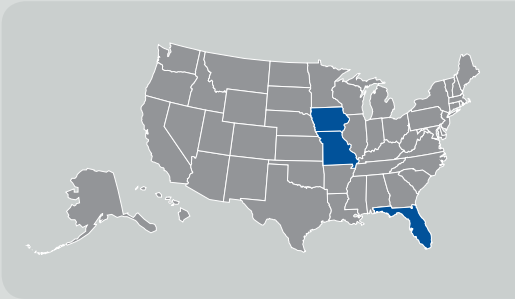
DESCRIPTION

The AC-130U Spooky gunship provides close air support, air interdiction, and armed reconnaissance. Other missions include perimeter and point defense; escort; landing; drop and extraction zone support; forward air control; limited command and control; and combat search and rescue. The AC-130U model is the third-generation of C-130 gunships. It incorporates side-firing weapons integrated with sophisticated sensor, navigation, and fire control systems to provide surgical firepower or area saturation during extended loiter periods, at night and in adverse weather. The sensor suite consists of a television sensor, infrared sensor, and radar. These sensors allow the gunship to visually or electronically identify friendly ground forces and targets any place, any time. The AC-130U employs synthetic apertures strike radar for long-range target detection and identification. The gunship's navigational devices include the inertial navigation systems and GPS. The AC-130U employs the latest technologies and can attack two targets simultaneously.



CONTRACTORS

Prime: Airframe - Boeing (FL);
Integrated Weapon System
Support - Boeing (FL); **Radar** - SEI
 (MO); **Communications/Navigation** - Rockwell Collins (IA)



SPECIFICATIONS

Weight	155,000 lb. (gross weight)
Range	1,300 nautical miles (NM); unlimited with in-flight refueling
Armament	25 mm Gatling gun; 40 mm Bofors cannon; 105 mm Howitzer
Dimensions	Wingspan: 132 ft.; Length: 99 ft.; Height: 38 ft.

ACQUISITION STATUS

Program Status	Four new aircraft scheduled for delivery in CY06
Future Upgrades	Multiple modifications

ADVANCED EXTREMELY HIGH FREQUENCY (AEHF) SYSTEM

MISSION

Provides secure, survivable communications to U.S. warfighting forces during all levels of conflict.



DESCRIPTION

The Advanced Extremely High Frequency (AEHF) communications system provides secure, survivable, anti-jam, and anti-scinillation communications for strategic and tactical users with interoperability across services and agencies. It offers assured mission-critical strategic networks and low probability of detection and interception.



CONTRACTORS

Prime: Lockheed Martin (CA)
Subcontractor(s): Northrop
Grumman (CA)



SPECIFICATIONS

Size	Three-satellite constellation
Weight	13,400 lb.
Coverage	Global Coverage: 65° N–65° S
Capacity/Satellite	Protected EHF: 8.2 Mbps maximum data rate; 250 mbps loaded throughput
Compatibility	Backwards compatible to Milstar Low Data Rate (LDR) and Medium Data Rate (MDR) terminals

ACQUISITION STATUS

Program Status	3QFY04 Critical Design Review (CDR); 3QFY04 Follow-on buy decision; 2QFY06 Satellite 3 contract award; 3QFY08 Planned first launch
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MISSION

Destroy armored land combat vehicles, bunkers, structures, and ships with minimum collateral damage.



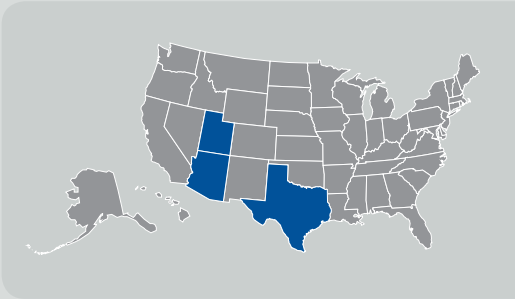
DESCRIPTION

The AGM-65 Maverick is a rocket-propelled, launch-and-leave, air-to-surface missile. Guidance is Television (TV) or Infrared (IR) Seeker (Navy has Laser version). The Maverick is a highly versatile, point-and-shoot weapon whose primary targets include armor, vehicles, bunkers, and air defense. There are currently eight versions of the Maverick. The Air Force is currently modifying existing Mavericks (B, A/G) into AGM-65H/K TV versions.



CONTRACTORS

Prime: Raytheon (AZ)
Subcontractor(s): Marvin Engineering (TX); Moog Inc. (UT); Alliant Tech Systems (UT)



SPECIFICATIONS

Weight	500 lb.
Range	10 nautical miles (NM) (H/K version)
Dimensions	Length: 97 in.; Diameter: 12 in.
Warhead	300 lb. Blast/Fragmentation—AGM-65G/G2/K; 125 lb. Shaped—AGM-65A/B/D/H
Compatability	Aircraft: A-10, F-16, F-15E

ACQUISITION STATUS

Program Status	AGM-65H/K modification production; Lot 6 being produced, Lot 7 to be determined.
Current Inventory	3,928 AGM-65A/Bs; 6,285 AGM-65Ds; 3,808 AGM-65G/G2s; 940 AGM-65H/Ks
Future Upgrades	1,500–2,000 AGM-65Gs (IR seeker) and AGM-65Bs (EO seeker) will be converted to AGM-65-H/Ks respectively. The goal is a 70/30 mix of IR (D/G/G2) and EO (H/K).

MISSION

Provide a highly accurate, long-range, air-to-surface strategic nuclear missile that can evade air and ground-based defenses to strike targets anywhere in the enemy's territory.



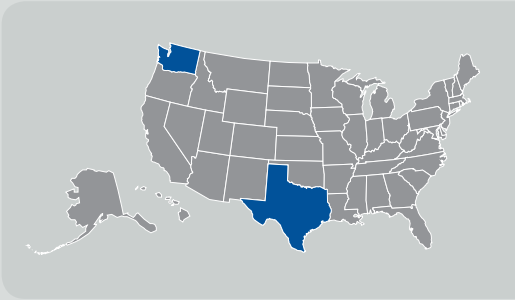
DESCRIPTION

The AGM-86B Air Launched Cruise Missile (ALCM) is a highly accurate, long-range, air-to-surface strategic nuclear missile. It carries a single W80 nuclear warhead. The small, winged AGM-86B missile is powered by a turbofan jet engine that propels it at sustained subsonic speeds. After launch, the missile's folded wings, tail surfaces, and engine inlet deploy. The AGM-86B is then able to fly complicated routes to a target through use of a terrain contour-matching guidance system. AGM-86B missiles can be air-launched in large numbers by B-52 bombers. An enemy force would have to counterattack each of the missiles, making defense against them costly and complicated. The missiles' small size and low-altitude flight capability make them difficult to detect on radar.



CONTRACTORS

Prime: Boeing (WA)
Subcontractor(s): E-Spectrum (TX)



SPECIFICATIONS

Weight	3,150 lb.
Range	1,500+ miles
Armament	W80-1 warhead
Dimensions	Length: 20.75 ft.; Diameter: 2 ft.; Wingspan: 12 ft.
Warhead	W80-1 warhead
Coverage	Global
Compatability	B-52

ACQUISITION STATUS

Program Status	Fielded
Unit Assignment	Barksdale AFB, LA; Minot AFB, ND
Future Upgrades	Undergoing life extension programs

MISSION

Provide an adverse weather, day/night, air-to-surface, accurate, stand-off, and outside-of-theater-defenses strike capability.



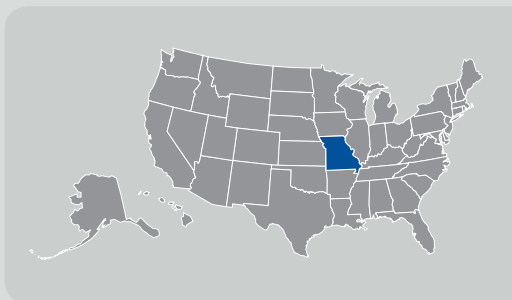
DESCRIPTION

The AGM-86C/D Conventional Air Launched Cruise Missile (CALCM) provides an adverse weather, day/night, air-to-surface, accurate, stand-off, and outside of theater defenses strike capability. It is equally effective for stand-alone, clandestine/punitive strikes and fully-integrated theater warfare. AGM-86C uses onboard GPS coupled with its Inertial Navigation System (INS) to fly. This allows the missile to guide itself to the target with pinpoint accuracy. The AGM-86C CALCM differs from the AGM-86B air-launched cruise missile in that it carries a conventional blast/fragmentation payload rather than a nuclear payload and employs a GPS aided INS. The AGM-86D incorporates avionics upgrades as well as a new penetrating warhead. The AGM-86D penetrator is capable against a wide range of hardened, deeply buried targets.



CONTRACTORS

Prime: Boeing (MO)



SPECIFICATIONS

Weight	3,250 lb. C-model/3,280 lb. for D-model
Range	>500 nautical miles (NM)
Dimensions	Length: 249 in.; Diameter: 24.5 in.
Warhead	3,000 lb. class, blast fragmentation warhead for C-model; 1,000 lb. class, Advanced Unitary Penetrator (AUP-3M) for D-model
Compatibility	B-52H

ACQUISITION STATUS

Program Status	Sustainment (no longer in production)
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AGM-88 HIGH SPEED ANTI-RADIATION MISSILE (HARM)

MISSION

Target and suppress enemy radar and surface-to-air missile sites at standoff range.



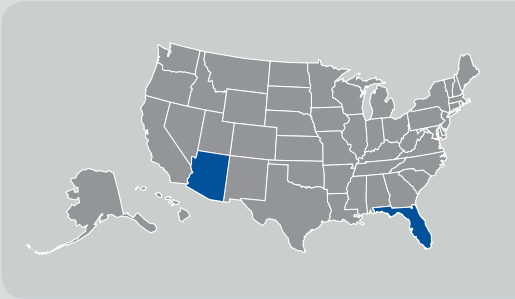
DESCRIPTION

The AGM-88 HARM supports the Air Force's and Navy's Suppression of Enemy Air Defenses (SEAD) mission. Currently, HARM is the Air Force's and Navy's primary reactive anti-radiation weapon capable of destroying or suppressing enemy radars. The missile uses anti-radiation homing to attack Surface-to-Air Missile (SAM) sites. HARM has a radar-sensing seeker, control section, warhead, and rocket motor. It is highly accurate and is capable in adverse weather. The Air Force platform for the missile is the F-16C/CJ; the Navy platforms are the F/A-18 and EA-6B. The Block IIIA/V missile upgrade adds limited geo-specificity and provides a significant step in countering rapidly improving threats and limiting collateral damage.



CONTRACTORS

Prime: Raytheon (AZ)



SPECIFICATIONS

Range	<80 nautical miles (NM)
Dimensions	Length: 164 in.; Diameter: 10 in.; Wingspan: 36 in.
Warhead	145 lb. fragmentation warhead (NEW 45.2 lb.); Block III/IIIA - 25,000 steel fragments (12.6 grain); Block IV/V - 14,000 tungsten cubes (30 grain)

ACQUISITION STATUS

Program Status	In sustainment
Unit Assignment	Shaw Air Force Base (AFB), SC; McEntire Air National Guard Station (ANGS), SC; Mountain Home AFB, ID; Misawa Air Base (AB), Japan; and Spangdahlem AB, Germany
Current Inventory	7,272
Future Upgrades	Under a Cooperative Research and Development (CRAD) agreement, Raytheon is upgrading the F-16 Aircraft Launcher Interface Computer and developing a HARM control section modification to incorporate GPS quality accuracy, increasing probability of kill and allowing precise geo-specificity. The Air Force is considering modifying some AGM-88Cs in the FY08 timeframe.

AGM-129A ADVANCED CRUISE MISSILE (ACM)

MISSION

Provide a subsonic, low-observable, air-to-surface strategic nuclear missile that can evade air and ground-based defenses to strike heavily defended, hardened targets.



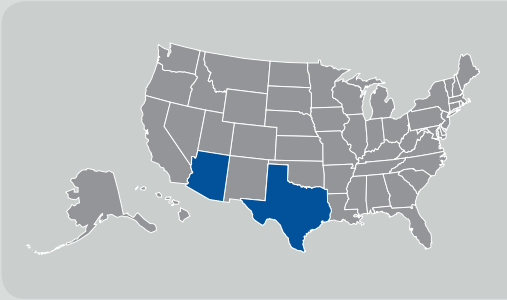
DESCRIPTION

The AGM-129A Advanced Cruise Missile (ACM) provides a subsonic, low-observable air-to-surface strategic nuclear missile with significant range, accuracy, and survivability improvements over the Air Launched Cruise Missile (ALCM). The ACM is designed to evade air and ground-based defenses in order to strike heavily defended, hardened targets at any location within an enemy's territory. The ACM carries a single W80 nuclear warhead. The ACM uses laser sensor updates to give it high navigation accuracy and "stealth" technology to give it a low radar cross section and an increased chance to penetrate enemy defenses. Up to 12 ACMs can be carried by a B-52 bomber, allowing the bomber to attack multiple targets without penetrating enemy airspace.



CONTRACTORS

Prime: Raytheon (AZ)
Subcontractor(s): E-Spectrum (TX)



SPECIFICATIONS

Weight	3,700 lb.
Range	2,000+ nautical miles (NM)
Armament	W80-1 warhead
Dimensions	Length: 20.8 ft.; Diameter: 2.4 ft.; Wingspan: 10 ft.
Coverage	Global
Compatability	B-52

ACQUISITION STATUS

Program Status	Fielded
Unit Assignment	Barksdale AFB, LA, and Minot AFB, ND
Future Upgrades	Undergoing life extension programs

AGM-130 STANDOFF ATTACK WEAPON

MISSION

Attack fixed high-value targets, day or night, from outside point defenses.



DESCRIPTION

The AGM-130 Standoff Attack Weapon is a solid rocket-powered Guided Bomb Unit (GBU)-15. The AGM-130's Inertial Navigation System/Global Positioning System (INS/GPS) Midcourse Guidance (MCG) upgrade provides the operator with the existing basic weapon capabilities along with a significantly reduced aircrew workload, an increased capability for target acquisition, and various options for cruise altitudes and impact angles. As a backup in the event of data link subsystem non-availability, the missile may be released in a direct attack mode (the missile may be released from low or high altitudes, but must be locked-on to target prior to release).



CONTRACTORS

Prime: Boeing (CA)



SPECIFICATIONS

Weight	3,000 lb.
Range	>30 nautical miles (NM)
Dimensions	Length: 158 in.; Diameter: 18 in.
Warhead	Warhead: Blast/Fragmentation - Mk-84 vertical and horizontal targets; Penetrator: BLU-109; Fuze: FMU-124A/B (Mk-84), FMU-143 (BLU-109)
Interoperability	Platform: F-15E
Guidance	TV or IR Seeker; INS/GPS navigation/aim point update/terminal automatic tracking or manual steering via data link; <3 meter accuracy.
Propulsion	Solid Rocket Motor

ACQUISITION STATUS

Program Status	Sustainment
Current Inventory	402
Future Upgrades	None

AIM-7M SPARROW

MISSION

Provide all-weather, all-altitude, medium-range capability to attack high-performance aircraft and missiles from any direction.



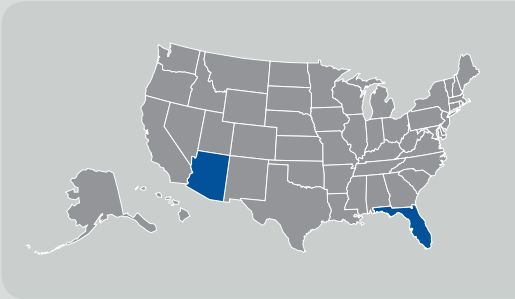
DESCRIPTION

The Air Intercept Missile (AIM)-7M Sparrow is a radar-guided, air-to-air missile with a high-explosive warhead. The versatile Sparrow provides all-altitude, all-weather, and all-aspect capability. The missile can be carried by the F-14, F-15, F-16ADF, and F-18, and is radar-guided throughout time-of-flight (TOF). The AIM-7M H-build incorporates guidance improvements such as Home-On-Jam capability.



CONTRACTORS

Prime: Raytheon (AZ)
Subcontractor(s): General Dynamics (FL)



SPECIFICATIONS

Weight	500 lb.
Range	More than 30 nautical miles (NM)
Dimensions	Length: 12 ft.; Diameter: 8 in.
Warhead	Blast/Fragmentation: WAU-17; Continuous Rod: WAU-10
Interoperability	Aircraft dependent
Compatability	Aircraft dependent
Service Ceiling	Aircraft dependent
Speed	More than 2,660 mph

ACQUISITION STATUS

Program Status	Navy program in sustainment
Unit Assignment	Numerous (system approved for demilitarization)
Current Inventory	2,500

MISSION

Provide all-weather, all-altitude, short-range, air-to-air capability to attack high-performance aircraft and missiles from any direction.



DIRECTIONS

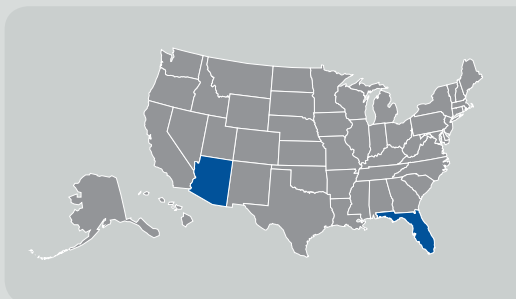
The Air Intercept Missile (AIM)-9M Sidewinder is a supersonic, short-range, passive infrared-guided, air-to-air missile with a high explosive warhead. The Sparrow has all-altitude, all-weather, and all-aspect capabilities. The missile can be carried by the A-10, F-14, F-15, F-16, F-16 ADF, and F-18. The missile's main components are an infrared homing guidance section, an active optical target detector, a high-explosive warhead, and a rocket motor. The AIM-9M features improved defense against infrared countermeasures, enhanced background discrimination capability, and a reduced-smoke rocket motor. These modifications increase its ability to locate and lock-on a target and decrease the missile's chances for detection.



CONTRACTORS

Prime: Raytheon (AZ)

Subcontractor(s): General Dynamics (FL)



SPECIFICATIONS

Weight	191 lb.
Range	More than 8 nautical miles (NM)
Dimensions	Length: 113 in.; Diameter: 5 in.
Warhead	Annular Blast/Fragmentation
Interoperability	Aircraft dependent
Compatability	Aircraft dependent
Service Ceiling	Aircraft dependent
Speed	Supersonic

ACQUISITION STATUS

Program Status	Navy program in sustainment
Unit Assignment	Numerous Active, Reserve, and National Guard squadrons
Current Inventory	2,500

MISSION

Provide a launch-and-leave air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft.



DESCRIPTION

The Air Intercept Missile (AIM)-9X Sidewinder is the newest variant of the Sidewinder missile. It is a supersonic, heat-seeking, short-range, air-to-air missile carried by fighter aircraft. It is used in both offensive and defensive counter-air operations. Offensively, the weapon ensures that U.S. and combined air forces can project the necessary power to ensure dominant maneuver. In the defensive counter-air role, the missile system provides force protection. The AIM-9X complements longer-range radar-guided missiles such as the Advanced Medium Range Air-to-Air Missile (AM-RAAM). The AIM-9X development program provides a number of improved capabilities, including:

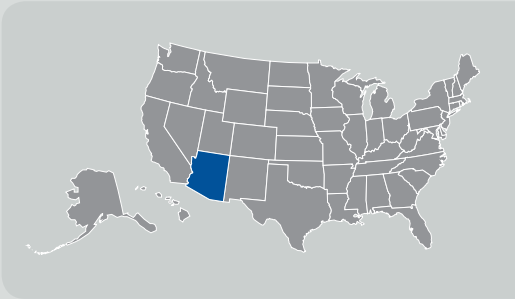
- Improved IR Countermeasure Performance
- Improved Probability of Kill (Pk)
- Highly Maneuverable Airframe
- High Off-Boresight (HOBS) Acquisition and Track
- Day/Night Capability

The 9X is also compatible with the Joint Helmet-Mounted Cueing System (JHMCS), which is designed for ease of target acquisition and decreased aircrew workload. Lead test platforms for the AIM-9X include the F-15C and F/A-18C/D. Follow-on platforms will include the F-16, F-22, F/A-18E/F, F-35, and FMS.



CONTRACTORS

Prime: Raytheon (AZ)



SPECIFICATIONS

Weight	187 lb.
Dimensions	Length: 119 in.; Diameter: 5 in.
Warhead	Annular Blast/Fragmentation
Interoperability	Aircraft dependent
Compatability	Aircraft dependent
Service Ceiling	Aircraft dependent
Speed	Supersonic

ACQUISITION STATUS

Program Status	Joint Air Force/Navy Program in production; projected inventory - 5097
Unit Assignment	Elmendorf AFB (AK), Lakenheath AFB (UK), Mountain Home AFB (ID), Kadena AB (Japan), Luke AFB (AZ), Cannon AFB (NM), and Missouri Air National Guard (ANG)
Current Inventory	592
Future Upgrades	Preplanned Product Improvement (P3I) efforts

AIM-120 (AMRAAM) ADVANCED MEDIUM RANGE AIR-TO-AIR MISSILE

MISSION

Provide all-weather, all-altitude, medium-range, air-to-air capability to attack high-performance aircraft and missiles from any direction.



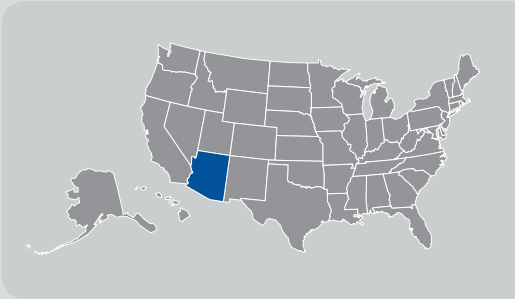
DESCRIPTION

The Air Intercept Missile (AIM)-120 Advanced Medium-Range Air-to-Air Missile (AMRAAM) is a supersonic, medium-range, active radar guided air-to-air missile with a high-explosive warhead. The AIM-120 provides all-altitude, all-weather, all-aspect capability. Its platform options include the F-15, F-16, F-18, and F-22A. The Preplanned Product Improvements (P3I) program will provide the AIM-120 with enhanced electronic protection (EP) capabilities; improved warhead, fuzing, and guidance; and increased kinematics via a new five-inch stretched rocket motor.



CONTRACTORS

Prime: Raytheon (AZ)



SPECIFICATIONS

Weight	350 lb.
Range	20+ nautical miles (NM)
Dimensions	Length: 144 in.; Diameter: 7.15 in.
Warhead	Blast/Fragmentation
Interoperability	Aircraft dependent
Compatability	Aircraft dependent
Service Ceiling	Aircraft dependent
Speed	Supersonic

ACQUISITION STATUS

Program Status	Joint Air Force/Navy Program in development/sustainment
Unit Assignment	Numerous Active, Reserve, and Guard units
Current Inventory	9,500
Future Upgrades	Preplanned Product Improvement (P3I) efforts

MISSION

Prevent fratricide and enhance mission effectiveness.



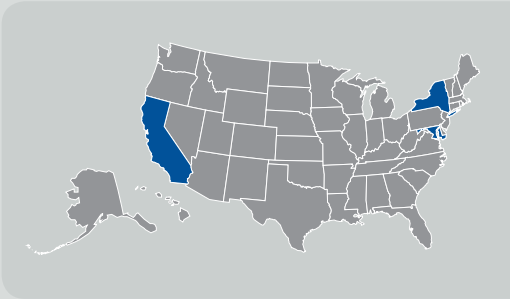
DESCRIPTION

Air Force Combat Identification (AF CID) is a family of radar, laser, and beacon systems designed to positively identify friend and foe on the battlefield. The goal of the effort is to accelerate the transition of advanced Combat Identification (CID) technologies into tactical weapons systems (fighter, bomber, Command, Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) platforms). Technologies include cooperative systems—where the target voluntarily identifies itself as a friend—and un-cooperative systems, where the target does not identify itself. A cooperative system under consideration is the Mark XIIA Mode 5 secure Identification Friend or Foe (IFF) interrogator/transponder beacon system. In the non-cooperative area, several efforts are pursuing air-to-ground, air-to-air, and ground-to-air identification systems that match radar or laser signatures derived from suspected enemy equipment with a signature database of known enemy equipment to positively identify friendly and enemy targets.



CONTRACTORS

Prime: Raytheon (NY); BAE (CA);
Northrop Grumman (MD)



SPECIFICATIONS

Range	Line-of-sight to horizon
Interoperability	Interoperable among Services and with NATO allies

ACQUISITION STATUS

Program Status	Under contract and beginning development
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MISSION

Enable deployment, checkout, and flight of operational Air Force, national, allied, and research and development satellites.

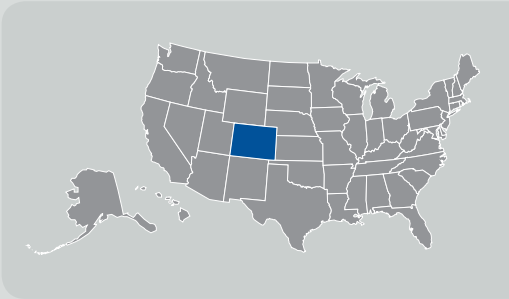


DESCRIPTION

The Air Force Satellite Control Network (AFSCN) is the Nation's only high-power, 24/7 global network operating Department of Defense (DoD) national, civil, and allied satellites in any orbit. Capability is provided through a global system of control centers, remote tracking stations, and communications links. It is required for all DoD launch and early orbit operations. The network enables satellite telemetry, tracking, and commanding, and provides high-power uplink capability for anomaly resolution and satellite emergencies.

CONTRACTORS

Prime: Honeywell Technical Services, Inc. (CO)



SPECIFICATIONS

Size	Eight remote tracking stations, 15 antennas, four data link terminals, one checkout facility, and two transportable tracking stations antennas, as well as two operations control centers, and centralized scheduling and control of the network assets
Range	Global coverage, all orbits
Coverage	Continuous global coverage
Capacity/Satellite	One satellite per tracking station antenna; more than 150 satellites supported; more than 160,000 contacts per year
Interoperability	Interoperable with Navy, National Oceanic and Atmospheric Administration (NOAA), National Air and Space Administration (NASA), and national users

ACQUISITION STATUS

Program Status	Operational
Future Upgrades	An ongoing program of upgrades is designed to replace unsustainable, aging antennas and 1960s era electronics, as well as improve scheduling and orbit analysis systems and improve interoperability with civil networks

AIRBORNE LASER (ABL)

MISSION

Provide the capability to acquire, track, and kill ballistic missiles in their boost phase, thus protecting U.S. deployed forces, U.S. allies, and areas of vital interest from ballistic missile attack.



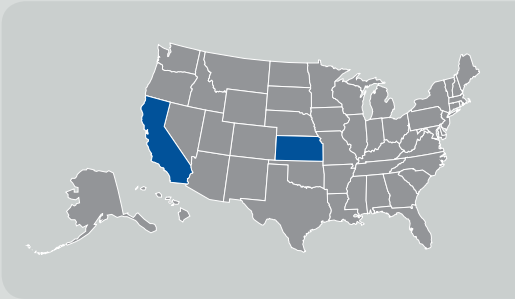
DESCRIPTION

The Airborne Laser (ABL) is a modified Boeing 747-400. It kills ballistic missiles in boost phase; autonomously detects, tracks, and engages ballistic missiles; and provides accurate missile launch location and impact points. The ABL is rapidly deployable; it will function as the pathfinder for future Directed Energy (DE) weapons and has the potential for other adjunct missions.



CONTRACTORS

Prime: Battle Management and
Air Vehicle Integration & Test,
Aircraft - Boeing Company (KS, CA);
Beam Control/Fire Control System
- Lockheed Martin (CA); Laser
- Northrop Grumman (CA)



SPECIFICATIONS

Weight	Takeoff weight - 803,000 lb.
Range	24 hours of flight with refueling, but needs to periodically return to check oil consumption
Armament	No armaments, but the loading and unloading of chemicals at the fuel farm is treated like a weapon storage area
Dimensions	Length: ~ 245 ft.; Width: 231 ft.
Warhead	High Energy Laser
Coverage	Refuelable
Interoperability	Functions as an element of the Ballistic Missile Defense System (BMDS); Link 16

ACQUISITION STATUS

Program Status	Completed eight months of flight testing at Edwards AFB in 4QFY05—very successful tests of the integrated Beam Control/Fire Control (optics) and BMC4I; Laser System Integration Lab (SIL) testing at Edwards AFB is complete. Multiple full-duration lases at the required lethal power were completed in 1QFY06. Over 50 lases since November 2004 have demonstrated reliable operation of the laser segment. The aircraft is currently in modification at Wichita, KS, to augment its floor to accommodate laser installation and to install solid-state lasers for missile tracking and atmospheric compensation. System will conduct ground and flight testing in 2006.
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MISSION

Process, exploit, and disseminate data, information, and intelligence from Intelligence, Surveillance, and Reconnaissance (ISR) sensors such as the U-2, Global Hawk, Predator, and others.



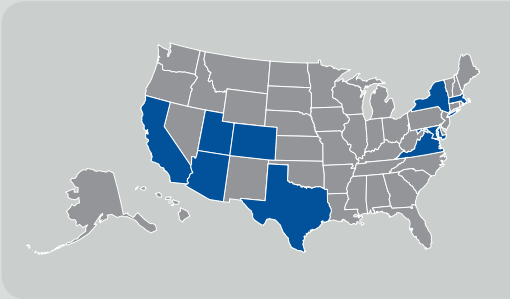
DESCRIPTION

The Air Force Distributed Common Ground System (AF DCGS) is a network-centric system of systems capable of tasking ISR sensors and receiving, processing, exploiting, and disseminating data and information from airborne, national, and commercial platforms and sensors. This weapon system consists of numerous Active Duty, Air National Guard, and mission-partner sites, interconnected by a robust communications structure that enables collaborative reachback ISR operations. AF DCGS operators correlate collected imagery intelligence, signals intelligence, and measurement and signatures intelligence data to provide decision-quality information to the Joint Task Force and below, including significant support to time-critical targeting operations.



CONTRACTORS

Prime: Raytheon (TX; CA; VA), Lockheed Martin (AZ; CO), L-3 Communications (UT), Goodrich (MA), Northrop Grumman (MD), General Dynamics (VA), BEA (NY), BAE (CA), Kodak (NY)



SPECIFICATIONS

Range	Worldwide via datalink relay and satellite
Coverage	Worldwide via reachback operations
Size	Core locations: Langley AFB, VA; Beale AFB, CA; Hickam AFB, HI; Ramstein AB, Germany; Pacific Air Forces. Air National Guard (ANG) locations: Wichita, KS; Birmingham, AL; Little Rock, AR; Reno, NV; Salt Lake City, UT. Other worldwide locations.
Interoperability	U-2, Global Hawk, Predator, and other ISR platforms/ ISR sensors; DoD DCGS architecture; intelligence community systems; national intelligence databases; theater communications systems and datalinks; DCGS Integration Backbone; Common Imagery Processor

ACQUISITION STATUS

Program Status	Sustainment
Future Upgrades	Upgrading to 10.2 configuration

AN/USQ-163 FALCONER AIR AND SPACE OPERATIONS CENTER WEAPON SYSTEM (AOC-WS)

MISSION

Provide Joint/Combined Force Air Component Commander's (JFACC/CFACC's) primary tool for commanding air and space power.



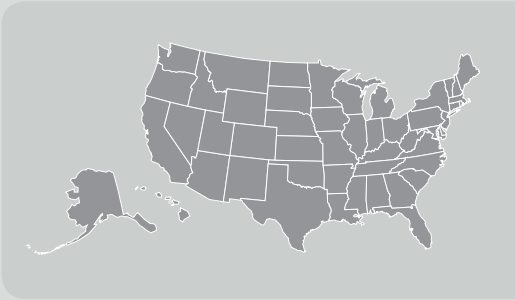
DESCRIPTION

The AN/USQ-163 Falconer Air and Space Operations Center Weapon System (AOC-WS) is the senior element of the Theater Air Control System. The Joint Force/Coalition Force Air Component Commander (JFACC/CFACC) uses the system for planning, executing and assessing theater-wide air and space operations. The AOC-WS develops operational strategy and planning documents. It also disseminates tasking orders, executes day-to-day peacetime and combat air and space operations, and provides rapid reaction to immediate situations by exercising positive control of friendly forces.



CONTRACTORS

To be determined



SPECIFICATIONS

Size	Each AOC-WS is sized to support its mission; Averages: 1,000–2,000 people; 70,000 square ft. of space.
Interoperability	AOC-WS interoperates using Internet Protocol (IP) and tactical data networks with Joint and Coalition Command and Control (C2) units at various command levels. It receives ISR data from various sources at various classification levels. Air Tasking Orders and Airspace Control Orders are disseminated to air bases throughout the theater. AOC receives and processes situation awareness data from tactical units to enable the prosecution of time-sensitive targets.

ACQUISITION STATUS

Program Status	Pre-Milestone B for Increment 10.2; currently in Source Selection process
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MISSION

Rapidly deliver massive quantities of precision and non-precision weapons against any adversary, anywhere in the world, at any time.



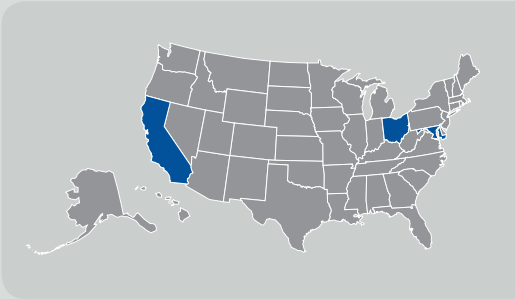
DESCRIPTION

The multi-mission B-1B Lancer is the backbone of America's long-range bomber force. It is a highly versatile aircraft that carries the largest payload of both guided and unguided weapons in the Air Force inventory. The B-1B's offensive avionics system includes high-resolution synthetic aperture radar, capable of tracking, targeting, and engaging moving vehicles as well as self-targeting and terrain-following modes. In addition, the B-1B's equipment enables aircrews to autonomously navigate globally, without the aid of ground-based navigation aids, as well as to engage targets with a high level of precision. The B-1B features an integrated, robust onboard defense and countermeasures system. The aircraft can carry up to 30 cluster munitions (CBU-87, -89, -97, -103, -104, -105) or up to 24 Joint Direct Attack Munitions (JDAM) guided weapons. The B-1B is flexible enough to be employed from inside or outside the theater of operations and is capable of conducting all-weather, deep strike, and night air-to-surface attacks. The B-1B's speed, superior handling characteristics, substantial payload, excellent radar targeting system, long loiter time and survivability enable the B-1B to create a multitude of far-reaching effects across the battlefield, as a key element of any joint/composite strike force.



CONTRACTORS

Prime: Airframe - Boeing North American (CA); **Propulsion** - General Electric (OH); **Radar** - Northrop Grumman (MD)



SPECIFICATIONS

Weight	477,000 lb. (max weight)
Range	Intercontinental (unrefueled)
Armament	84 Mk-82 (500-lb.) or 24 Mk84 (2,000-lb.) general-purpose bombs; Mk-62 and Mk 65 mines; 30 CBU-87/89/97 cluster munitions and CBU-103/104/105 wind corrected equivalents; 24 GBU-31 (2,000-lb.) JDAMs. Initial capability for 12 AGM-154 Joint Standoff Weapons (JSOW) and 24 AGM-158 Joint Air-to-Surface Standoff Missiles (JASSM) in October 2004. Largest ordnance load-out of any U.S. aircraft (54,000 lb.).
Dimensions	Wingspan, wings forward: 137 ft.; Wingspan, wings aft: 79 ft.; Length: 146 ft.; Height: 34 ft.
Service Ceiling	Over 30,000 ft.
Speed	900-plus mph (Mach 1.2 at sea level)
Crew	Four (two pilots, two weapon systems officers)

ACQUISITION STATUS

Program Status	Sustainment, conventional modifications
Unit Assignment	Dyess AFB, TX; Ellsworth AFB, SD
Current Inventory	67
Future Upgrades	JASSM-Extended Range (ER), Defensive Upgrade, Radar, Situational Awareness, Datalink, on-board diagnostics, inertial navigation upgrade, Target Pod

MISSION

Deliver massive firepower in a short time, anywhere on the globe through previously impenetrable defenses using both conventional and nuclear munitions.



DESCRIPTION

Along with the B-52 and B-1B, the B-2 provides the strategic effectiveness inherent in manned multi-role bombers. With its low-observable, or "stealth," characteristics, it can penetrate an enemy's most sophisticated defenses and threaten its most valued and heavily defended targets. Its capability to penetrate air defenses and threaten effective retaliation with relative impunity provides a strong, effective deterrent and combat force well into the 21st century. The revolutionary blending of low-observable technologies with high aerodynamic efficiency and large payload gives the B-2 important advantages over existing bombers. Its low-observability provides greater freedom of action at high altitudes, thus increasing its range and providing a better field of view for the aircraft's sensors. The B-2's low observability is derived from a combination of reduced infrared, acoustic, electromagnetic, visual, and radar signatures. The dramatically reduced sum of these signatures makes it difficult for today's sophisticated defensive systems to detect, track, and engage the B-2. The B-2 has a crew of two: a pilot in the left seat and mission commander in the right, compared to the B-1B's crew of four and the B-52's crew of five.



CONTRACTORS

Prime: Northrop Grumman (CA)



SPECIFICATIONS

Size	Length: 69 ft. (20.9 m); Height: 17 ft. (5.1 m); Wingspan: 172 ft. (52.12 m)
Weight	(Typical): 336,500 lb. (152,634 kg)
Range	6,000 nautical miles (NM) unrefueled
Armament	Conventional or nuclear weapons
Speed	High subsonic
Payload	More than 40,000 lb. (18,144 kg)
Ceiling	50,000 ft. (15,240 m)

ACQUISITION STATUS

Program Status	Sustainment, Modification
Unit Assignment	Whiteman AFB, MO
Current Inventory	21
Future Upgrades	Link-16, Alternate High Frequency Material, Radar Modernization Program, Extremely High Frequency (EHF) Satellite Communications (SATCOM) and Computers

MISSION

Provide a long-range, heavy bomber capable of flying at high subsonic speeds at altitudes up to 50,000 feet carrying nuclear or precision guided conventional ordnance with worldwide precision navigation capability.



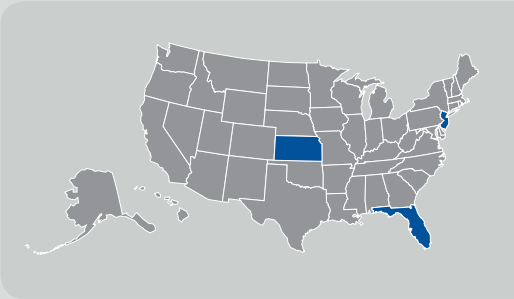
DESCRIPTION

Air Combat Command's B-52H Stratofortress is a long-range, heavy bomber that can perform a variety of missions. For more than 40 years, B-52 Stratofortresses have been the backbone of the manned strategic bomber force for the United States. The B-52 is capable of dropping or launching the widest array of weapons in the U.S. inventory. This includes gravity bombs, cluster bombs, precision guided missiles, and joint direct attack munitions (JDAMs). Updated with modern technology, the B-52 will be capable of delivering the full complement of joint developed weapons and continues into the 21st century as an important element of our nation's defenses.



CONTRACTORS

Prime: Airframe - Boeing Aircraft (KS); Engines - Pratt & Whitney (KS)
Subcontractor(s): Electronic Counter Measures Improvement (ECMI) - ITT Industries (NJ); Avionics Midlife Improvement (AMI) - Honeywell (FL)



SPECIFICATIONS

Weight	Approximately 185,000 lb. empty
Range	Unrefueled 8,800 mi. (7,652 nautical miles)
Armament	Approximately 70,000 lb. (31,500 kg) mixed ordnance—bombs, mines, and missiles modified to carry air-launched cruise missiles. Advanced Weapons Integration —LITENING Pod, Joint Air to Surface Standoff Missile-Extended Range (JASSM-ER), Wind Corrected Munitions Dispenser-Extended Range (WCMD-ER), Miniature Air Launched Decoy (MALD), and GBU-38 integration.
Dimensions	Length: 159 ft., 4 in.; Height: 40 ft., 8 in.; Wingspan: 185 ft.
Service Ceiling	50,000 ft.
Speed	650 mph (Mach 0.86)
Crew Capacity	Five (aircraft commander, pilot, radar navigator, navigator, and electronic warfare officer)

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Minot AFB, ND; Barksdale AFB, LA
Current Inventory	94 (includes one on permanent loan to NASA)
Future Upgrades	Conventional Modifications; Combat Network Communications Technology (CoNECT)—Satellite and secure wideband high data rate communication, datalink; Advanced Targeting Pods—Sniper targeting pod capability; Avionics Midlife Improvement—inertial navigation, aircraft computer and data transfer unit upgrades

MISSION

Provide strategic inter-theater airlift in support of U.S. national defense.



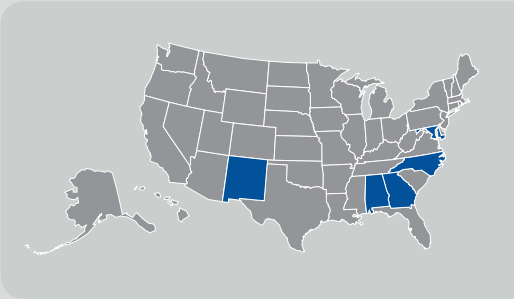
DESCRIPTION

The C-5 Galaxy provides the Air Mobility Command with inter-theater airlift in support of U.S. national defense. The C-5 Galaxy and the C-17 Globemaster are partners in Air Mobility Command's (AMC's) strategic airlift concept. The C-5 Galaxy is one of the largest aircraft in the world. It can carry outsize and oversize cargo over intercontinental ranges and can takeoff or land within relatively short distances.



CONTRACTORS

Prime: Lockheed Martin (GA)
Subcontractor(s): Avionics
Modernization Program (AMP)
- Honeywell (NM), ARINC (MD);
**Reliability Enhancement and
Re-Engining Program (RERP)**
- General Electric (NC), Goodrich (AL)



SPECIFICATIONS

Weight	769,000 lb. peacetime; 840,000 lb. wartime
Range	Unlimited with in-flight refueling
Dimensions	Wingspan: 222.9 ft.; Height: 65.1 ft.; Length: 247.1 ft.
Service Ceiling	45,000 ft.
Payload	Up to 36 pallets (270,000 lb.)
Speed	518 mph (450 knots)
Passenger Capacity	73

ACQUISITION STATUS

Program Status	Sustainment/upgrade
Unit Assignment	Air Force Reserve (AFRES): 33 C-5A, Lackland AFB, TX; Westover ARB, MA; Wright-Patterson AFB, OH Air National Guard (ANG): 17 C-5A, Memphis, TN; Martins- burg, WV; Stewart ANG Base, NY; Active: 10 C-5A, 50 C-5B and 2 C-5C, Travis AFB CA; Altus AFB, OK; Dover AFB, DE
Current Inventory	112
Future Upgrades	Large Aircraft Infrared Countermeasures (LAIRCM)

MISSION

Provide operational support airlift for high priority passengers and cargo.



DESCRIPTION

The C-9C is the military variant of the DC-9-32, equipped with robust passenger communications and data transfer capabilities. The plane features an executive suite and first-class style seating for up to 42 passengers.



CONTRACTORS

Prime: Airframe Depot - Lockheed Martin (SC); Engine Depot - Aero-Thrust (FL)



SPECIFICATIONS

Weight	110,000 lb.
Range	2,100 nautical miles (NM)
Dimensions	Wingspan: 93 ft.; Length: 119 ft.; Height: 27 ft.
Service Ceiling	37,000 ft.
Speed	520 mph (Mach 0.80)
Passenger Capacity	42 passengers

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Scott AFB, IL
Current Inventory	3
Future Upgrades	Mission Communications/Data Systems

MISSION

Provide cargo and passenger airlift for operational support airlift and embassy support missions; support test operations at Edwards and Holloman Air Force Bases.



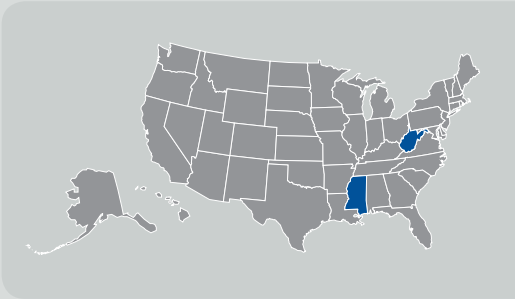
DESCRIPTION

The C-12C/D/F/J is a military variant of the Beech Super King Air 200 (C/D/F) and 1900 (J) with specialized mission equipment.



CONTRACTORS

Prime: Airframe - L-3 Communica-
tions/Vertex Aerospace (MS)
Subcontractor(s): Engines
Propulsion - Pratt & Whitney (WV)



SPECIFICATIONS

Weight	12,500 lb. (J-model = 16,600 lb.)
Range	1,700 nautical miles (NM) (J-model = 1,500 NM)
Dimensions	Wingspan: 55 ft.; Length: 44 ft. (J-model = 58 ft.); Height: 15 ft.
Service Ceiling	31,000 ft. (J-model = 25,000 ft.)
Speed	300 to 340 mph depending on model
Passenger Capacity	Eight passengers (J-model = 19 passengers)

ACQUISITION STATUS

Program Status	Sustainment; delivery completed in December 1987
Unit Assignment	Osan AB, Korea; Elmendorf AFB, AK; Edwards AFB, CA; Holloman AFB, NM; Andrews AFB, MD; Embassy sites worldwide
Current Inventory	28
Future Upgrades	Electronic Flight Information System (Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) and Navigation Safety)

MISSION

Provide rapid strategic delivery of troops and all types of cargo to main operating bases or directly to forward bases in the deployment area.



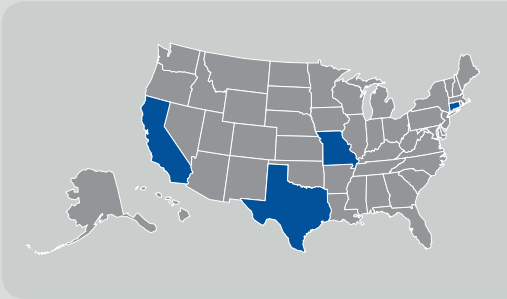
DESCRIPTION

The C-17 Globemaster III is the newest, most flexible cargo aircraft to enter the airlift force. It is capable of performing tactical airlift and airdrop missions when required. The inherent flexibility and performance of the C-17 force improve the ability of the total airlift system to fulfill the worldwide air mobility requirements of the United States.



CONTRACTORS

Prime: Airframe - Boeing (CA, MO);
Engines - Pratt & Whitney (CT)
Subcontractor(s): Major Airframe
Components - Vought Aircraft
 Industries (TX)



SPECIFICATIONS

Weight	585,000 lb.
Range	Unlimited with in-flight refueling
Dimensions	Wingspan: 169 ft. 10 in.; Height: 55 ft. 1 in.; Length: 174 ft.
Service Ceiling	45,000 ft.; 450 knots at 28,000 ft. (Mach .74)
Speed	Mach 0.74
Payload	164,900 lb. (18 pallets)
Passenger Capacity	102 troops/paratroops or 48 litters and 54 ambulatory attendants

ACQUISITION STATUS

Program Status	Production; 15 per year; projected inventory - 180
Unit Assignment	Air Force Reserve (AFRES): March AFB , CA; Air National Guard (ANG): Jackson, MS; Active: McChord AFB,WA; Travis AFB, CA; Edwards AFB, CA; Elmendorf AFB,AK; Hickam AFB, HI; Altus AFB, OK; Charles- ton AFB, SC; Dover AFB, DE; McGuire AFB, NJ
Current Inventory	148
Future Upgrades	Modifications

MISSION

Provide worldwide air transportation for the vice president, cabinet, and congressional members, and other high-ranking U.S. and foreign officials; provide air transportation supporting U.S. European Command (USEUCOM) operational requirements.



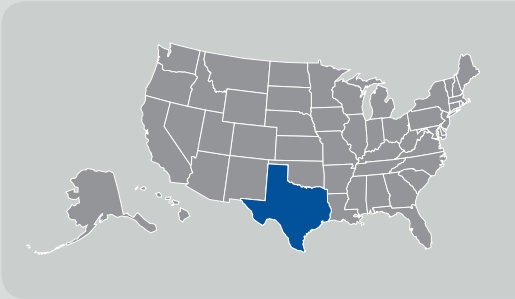
DESCRIPTION

The C-20B/H is the military variant of the Gulfstream III (C-20B) and Gulfstream IV (C-20H) equipped with passenger communications and data transfer systems.



CONTRACTORS

Prime: Airframe - M7 Aerospace (TX)
Subcontractor(s): Engines - Rolls Royce (TX); Dallas Airmotive (TX)



SPECIFICATIONS

Weight	C-20B: 69,700 lb.; C-20H: 74,600 lb.
Range	C-20B: 2,700 nautical miles (NM); C-20H: 3,375 NM
Dimensions	Wingspan (B,H): 78 ft./78 ft.; Length (B,H): 83 ft./88 ft.; Height (B,H): 25 ft./25 ft.
Service Ceiling	45,000 ft.
Speed	530 mph (Mach 0.80)
Passenger Capacity	12 passengers

ACQUISITION STATUS

Program Status	Sustainment; delivery completed in 1987 (C-20B) and 1996 (C-20H)
Unit Assignment	Andrews AFB, MD; Ramstein AB, Germany
Current Inventory	Five (5) C-20B; two (2) C-20H
Future Upgrades	Mission Communication/Data Systems

MISSION

Provide high-priority cargo and passenger airlift in support of combatant commander operational requirements; enable medical evacuations.



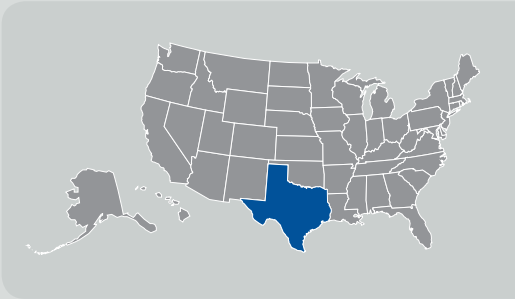
DESCRIPTION

The C-21 is the military version of the Lear Jet 35A business jet. It provides cargo and passenger airlift and can be configured to transport litters for medical evacuations.



CONTRACTORS

Prime: Airframe - Computer Sciences Corp./APD (TX);
Engines - Dallas Airmotive (TX)



SPECIFICATIONS

Weight	18,300 lb.
Range	2,300 nautical miles (NM)
Dimensions	Wingspan: 39 ft.; Length: 48 ft.; Height: 12 ft.
Service Ceiling	45,000 ft.
Speed	530 mph (Mach 0.81)
Passenger Capacity	8 passengers and 42 cubic feet of cargo

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Langley AFB, VA; Andrews AFB, MD; Wright-Patterson AFB, OH; Scott AFB, IL; Offutt AFB, NE; Peterson AFB, CO; Keesler AFB, MS; Ramstein AB, Germany; Yokota AB, Japan
Current Inventory	76
Future Upgrades	None

MISSION

Provides worldwide air transportation for the president, vice president, cabinet members, congressional delegations, and other senior U.S. and foreign officials.



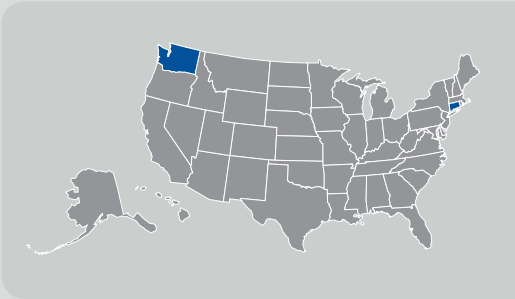
DESCRIPTION

C-32A is the military variant of the commercial Boeing 757-200 with interior furnishings and electronic equipment to accommodate senior government officials. The cabin is equipped with robust passenger communications and data transfer systems and an executive suite.



CONTRACTORS

Prime: Airframe - Boeing (WA)
Subcontractor(s): Engines - Pratt & Whitney (CT)



SPECIFICATIONS

Weight	255,000 lb.
Range	3,800 nautical miles (NM)
Dimensions	Wingspan: 125 ft.; Length: 155 ft.; Height: 44.5 ft.
Service Ceiling	41,000 ft.
Speed	530 mph (Mach 0.8)
Passenger Capacity	46 passengers

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	89th Air Wing, Andrews AFB (MD)
Current Inventory	4
Future Upgrades	Mission Communication/Data System; Communications, Navigation, Surveillance/Air Traffic Management CNS/ATM

MISSION

Provide worldwide air transportation for the vice president, White House staff, cabinet members, members of Congress, Combatant Commanders (COCOM) and other senior U.S. and foreign officials.



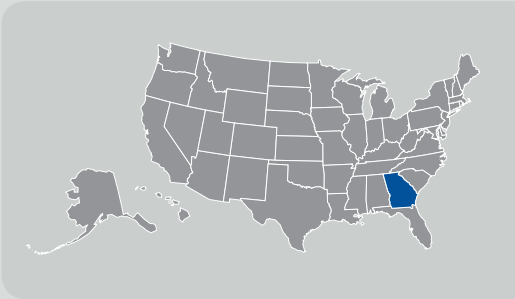
DESCRIPTION

The C-37A is a military variant of the commercial Gulfstream V jet, equipped with robust passenger communications and data systems.



CONTRACTORS

Prime: Airframe - Gulfstream (GA)
Subcontractor(s): Engines -
Rolls Royce (GA)



SPECIFICATIONS

Weight	90,500 lb.
Range	5,300 nautical miles (NM)
Dimensions	Wingspan: 93.5 ft.; Length: 96.5 ft.; Height: 26 ft.
Service Ceiling	51,000 ft.
Speed	530 mph (Mach 0.8)
Passenger Capacity	14

ACQUISITION STATUS

Program Status	Sustainment; delivery completed 1QFY03
Unit Assignment	Andrews AFB, MD (VIP Special Airlift Mission); MacDill AFB, FL (COCOM); Hickam AFB, HI (COCOM); Chievres Air Base, Belgium (COCOM)
Current Inventory	Nine
Future Upgrades	Communication Systems

MISSION

Provide worldwide air transportation for U.S. leaders and Combatant Commanders.



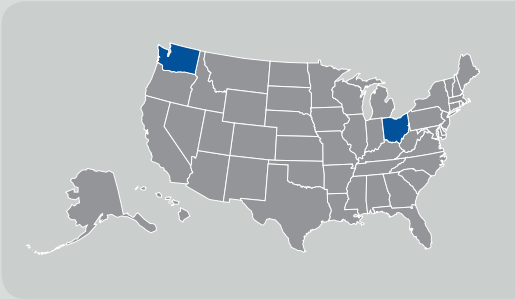
DESCRIPTION

The C-40 B/C is a military variant of the commercial Boeing 737 business jet, equipped with robust communications and data transfer systems (C-40B only). It provides air transportation for U.S. leaders, including combatant commanders. Customers include the vice president, the first lady, cabinet members, and members of Congress. The C-40C is also capable of variable configurations for accommodating from 34 to 68 passengers, depending on mission requirements.



CONTRACTORS

Prime: Airframe - Boeing (WA)
Subcontractor(s) - Engines - CFM International (WA)



SPECIFICATIONS

Weight	171,000 lb.
Range	C-40B: 4750 nautical miles (NM); C-40C: 4,628 NM
Dimensions	Wingspan: 112 ft.; Length: 117 ft.; Height: 41 ft.
Service Ceiling	41,000 ft.
Speed	530 mph (Mach 0.8)
Passenger Capacity	C-40B: 26 passengers and 11 crew; C-40C: up to 68 passengers and 11 crew

ACQUISITION STATUS

Program Status	Procurement; three additional C-40Cs have been purchased for delivery to Scott AFB, IL during FY07/08; AF expects to complete delivery in FY08
Unit Assignment	89th Air Wing, Andrews AFB, MD; 15th Air Base Wing, Hickam AFB, HI; 86th Air Wing, Ramstein AB, Germany; 201st Airlift Squadron, DC Air National Guard, Andrews AFB, MD; 932nd Air Wing, Scott AFB, IL

C-130 HERCULES

MISSION

Provide airlift and transport for air-dropping troops and equipment into hostile areas.



DESCRIPTION

The C-130 Hercules operates throughout the U.S. Air Force, serving with Air Mobility Command (stateside based), Air Force Special Operations Command, theater commands, the Air National Guard, and the Air Force Reserve Command, fulfilling a wide range of operational missions in both peace and wartime situations. Basic and specialized versions of the aircraft perform a diverse number of roles, including airlift support, Antarctic resupply, aeromedical missions, weather reconnaissance, aerial spray missions, fire-fighting duties for the U.S. Forest Service, and natural disaster relief missions.



CONTRACTORS

Prime: Lockheed Martin
Aeronautics Company (MD)



SPECIFICATIONS

Weight	C-130E/H/J: 155,000 lb. (69,750 kg)
Range	Range at Maximum Normal Payload - C-130H: 1,208 mi. (1,050 nautical miles (NM)); C-130E: 1,150 mi. (1,000 NM) Range with 35,000 lb. of payload - C-130H: 1,496 mi. (1,300 NM); C-130E: 1,438 mi. (1,250 NM)
Dimensions	Length: 97 ft., 9 in. (29.3 m); Height: 38 ft., 10 in. (11.9 m); Wingspan: 132 ft., 7 in. (39.7 m)
Service Ceiling	C-130H: 23,000 ft. (7,077 m) with 42,000 lb. (19,090 kg) payload; C-130E: 19,000 ft. (5,846 m) with 42,000 lb. (19,090 kg) payload
Payload	C-130E, 42,000 lb. (19,090 kg); C-130H, 42,000 lb. (19,090 kg)
Speed	C-130E: 345 mph/300 ktas (Mach 0.49) at 20,000 ft. (6,060 m); C-130H: 366 mph/318 ktas (Mach 0.52) at 20,000 ft. (6,060 m)
Passenger Capacity	92 combat troops or 64 paratroopers

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Air Force Reserve (AFRES): Peterson AFB, CO; Minn-St Paul, MN; Gen Mitchell, WI; Youngstown, OH; Niagara, NY; Pittsburgh, PA; Willow Grove, PA; Pope AFB, NC; Dobbins AFB, GA; Maxwell AFB, AL Air National Guard (ANG): Cheyenne, WY; Rosencrans, MO; Peoria, IL; Minn-St Paul, MN; Selfridge, MI; Mansfield, OH; Schenectady, NY; New Castle, DE; Yeager, WV; Charlotte, NC; Luis Munoz Marin IAP, PR; Savannah, GA; Louisville, KY; Nashville, TN; Little Rock AFB, AR; Carswell, TX; Will Rogers, OK; Elmendorf AFB, AK; Kulis, AK; Reno, NV; Boise, ID Active: Pope AFB, NC; Little Rock AFB, AR; Dyess AFB, TX; Elmendorf AFB, AK
Current Inventory	Active force, 186; Air National Guard, 222; Air Force Reserve, 106
Future Upgrades	Avionics Modernization Program (AMP), Large Aircraft Infrared Countermeasures (LAIRCM), Center Wing Box (CWB) Replacement, Enhanced Terrain Collision Avoidance System (ETCAS), APN-241 Weather Radar

MISSION

Provide unobtrusive, long-range, long-loiter collection capability in a permissive environment.



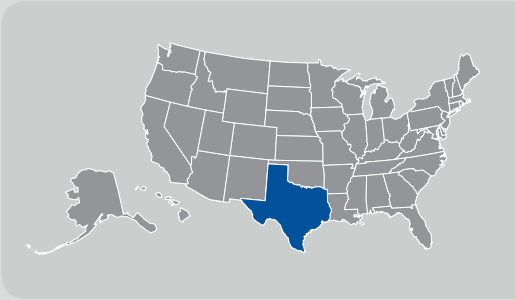
DESCRIPTION

SCATHE VIEW was developed to support short-duration, non-combatant evacuation and humanitarian relief operations (NEO and HUMRO) in a permissive or semi-permissive environment. Recently, SCATHE VIEW has evolved in the context of counter-insurgent and Global War on Terrorism (GWOT) combat operations as a tactical imagery collection system with unobtrusive, long-range, long-loiter collection capability. It provides imagery and video similar to the RQ-5 Hunter Unmanned Aerial Vehicle (UAV) and MQ-1 Predator remotely piloted aircraft (RPA) directly to ground personnel, while simultaneously retaining airlift capacity. SCATHE VIEW consists of a roll-on/roll off sensor pallet with two imagery analysts on-board, carried by specially modified C-130H aircraft. Employed with the Remote Operations Video Enhanced Receiver (ROVER) system, it can provide still-frame and full-motion video imagery downlink to receiver equipped ground units, complemented by real-time voice communications to the ground. This provides added situational awareness (an “eye in the sky”) to the warfighter and valuable support to combat operations in a GWOT environment, including force protection during real-time counter-insurgent operations. Credited by CENTAF for supporting at least 12 successful documented counter-IED operations, SCATHE VIEW has repeatedly proven its value through real-time direct support to ground troops. In one highly notable incident, SCATHE VIEW guided special forces troops to a clandestine position from which mortar attacks against U.S. troops had been carried out. It monitored fleeing insurgents, communicating their exact position to U.S. troops, who immediately captured them. During the same operation, the SCATHE VIEW alerted a U.S. Army helicopter to the presence of foreign debris in its rotors, necessitating an emergency landing. In a single operation, an insurgent offensive position was compromised, preventing future attacks, two perpetrators were captured, removing them as a threat to U.S. forces, and a U.S. helicopter and its pilot were alerted to a perilous in flight condition.



CONTRACTORS

Prime: ATK Mission Research ,
Integrated Systems (TX)



SPECIFICATIONS

Weight	920 lb.
Range	Range is same as C-130H: Maximum Normal Payload - 1,208 mi. (1,050 nautical miles (NM)) With 35,000 lb. of payload - C-130H: 1,496 mi. (1,300 NM)
Coverage	Full Motion Video

ACQUISITION STATUS

Program Status	Modification and sustainment
Current Inventory	Five sensors, five roll-on/roll-off exploitation pallets
Unit Assignment	C-130H aircraft, 152nd Airlift Wing (AMC); Scathe View system, 152nd intelligence Squadron (ACC), Reno ANG Base (NV)
Future Upgrades	Upgrading sensors to latest generation full motion video sensor (MX-15D); Beyond Line of Sight Capability, allowing passing of data to intermediate higher headquarters.

MISSION

Provide immediate movement of combat troops and supplies within theaters of operation, as well as weather reconnaissance and psychological operations capabilities.



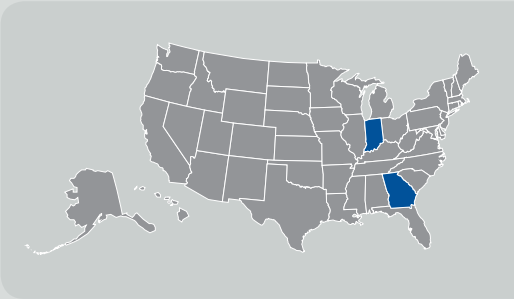
DESCRIPTION

The C-130 operates throughout the U.S. Air Force, serving with Air Education and Training Command, Air Force Special Operations Command, Air National Guard, and the Air Force Reserve Command, fulfilling a wide range of operational missions in both peace and war situations. Basic and specialized versions of the aircraft airframe perform a diverse number of roles, including airlift support, aeromedical missions, weather reconnaissance, and natural disaster relief missions. The WC-130J version provides weather reconnaissance and the EC-130J version provides psychological operations capabilities.



CONTRACTORS

Prime: Lockheed Martin (GA)
Subcontractor(s): **Engine** - Rolls Royce (IN); **Engine Subsystem** - GKN Aerospace (UK); **Propellers and Avionics** - Smith Aerospace (U.S. and UK)



SPECIFICATIONS

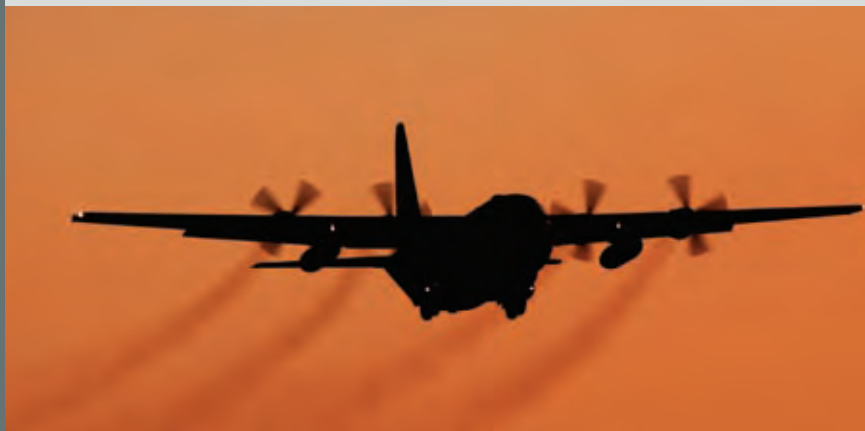
Weight	164,000 lb.		
Range	3,600 nautical miles (NM), Global with in-flight refueling (EC-130J)		
Dimensions	C-130J (Short): Wingspan - 132.6 ft.; Length - 97.8 ft.; Height - 38.8 ft. C-130J: Wingspan -132.6 ft.; Length - 112.8 ft.; Height - 38.8 ft.		
Service Ceiling	33,000 ft.		
Speed	342 knots		
Payload/Passenger Capacity	Load Comparisons	C-130E/H/J (Short)	C-130J
	Payload	42,000 lb.	47,000 lb.
	Cargo Floor Length	40 ft.	55 ft.
	463L Pallets	6	8
	Medical Litters	74	97
	CDS Bundles	16	24
	Combat Troops	92	128
	Paratroopers	64	92

ACQUISITION STATUS

Program Status	Full Rate Production through 2008; Projected inventory - 79; Requirement identified for 168 C-130Js; FY03 multi-year contract will deliver 42 C-130Js, FY05–FY09
Unit Assignment	Keesler AFB, MS; Baltimore, MD; Harrisburg, PA; Quonset, RI; Channel Islands, CA; Little Rock, AR
Current Inventory	46 fielded (19 C-130J, 11 C-130J (Short), 10 WC-130J, and 6 EC-130J)
Future Upgrades	Communication, Navigation & Safety/Air Traffic Management (CNS/ATM) requirements will be achieved through Block Upgrade Program

MISSION

Deliver near-real-time Intelligence, Surveillance, and Reconnaissance (ISR) information to locate and track enemy forces.



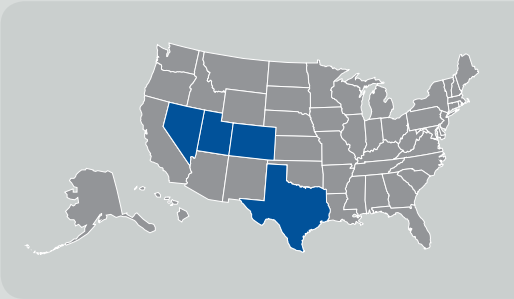
DESCRIPTION

The C-130 Senior Scout is a radio signal monitoring sensor package carried by the C-130. The Senior Scout offers a low-cost, small-footprint, quick-reaction collection capability to theater commanders and can also satisfy national-level information requirements. It is contained in a shelter mounted on pallets and configured for installation on any C-130H/H1/H2 aircraft. The crew complement includes several Signals Intelligence (SIGINT) operators to locate and track targets. The Senior Scout was recently cited for ISR excellence for operations in direct support of the 22nd Marine Expeditionary Unit (USMC) in Operation Enduring Freedom in June 2004.



CONTRACTORS

Prime: Lockheed Martin Integrated Systems and Solutions (CO);
Subcontractor(s): Sierra Nevada Corporation (Plano Microwave, Inc.), NV, TX, UT; L-3 Communications (TX)



SPECIFICATIONS

Size	Pallet Size: Three pallet sizes or approximately equal to an 18-ft. semi bed
Weight	Gross max takeoff weight 155,000 lb. Each Senior Scout shelter weighs approximately 24,500 lb.
Range	Collection range between 250–400 miles, dependent upon target, terrain and altitude. Mission length: 7 (un-refueled)—13 (refueled) hours
Dimensions	Wingspan: 132 ft.; Length: 100 ft.; Height: 38 ft.
Interoperability	NABRE, LINK 16, JTIDS, TADIL-A, TIBS, SENSOR PACER
Compatibility	Any C-130 H/H1/H2 (all services)

ACQUISITION STATUS

Program Status	Modification and sustainment
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CBU-87 COMBINED EFFECTS MUNITION (CEM)

MISSION

Provide penetration, fragmentation, incendiary effects for dispersed light armor and personnel targets.



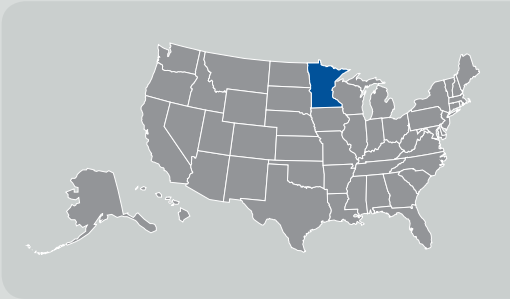
DESCRIPTION

The Cluster Bomb Unit (CBU)-87 Combined Effects Munition (CEM) is a multi-purpose cluster weapon (penetration, fragmentation, incendiary effects) for dispersed light armor and personnel targets. After release from the aircraft, and at pre-determined flight parameters, the CBU-87 dispenses 202 BLU-97 bomblets (3-lb. multi-purpose submunitions) over the target area in a circular pattern (pattern characteristics are determined by dispense conditions and winds). The CBU-87 improves combat efficiency. Using the CBU-87 (and area attack weapons in general) decreases the time required to destroy necessary targets in a campaign, decreases the number of sorties required, keeps aircrews out of harm's way, and decreases the number of weapons required to accomplish the mission.



CONTRACTORS

Prime: Aero General/Honeywell (MN), Alliant Tech (MN)



SPECIFICATIONS

Weight	~950 lb.
Range	Ballistic/unguided weapon
Armament	Contains 202 BLU-97 (3-lb.) combined effects bomblets (shaped charge/fragmentation/incendiary)
Dimensions	Length: 92 in.; Diameter: 15.6 in.
Coverage	Coverage area (submunition pattern size) depends on many factors, but the pattern is typically circular with a diameter of about 200 ft.
Compatability	Multiple aircraft

ACQUISITION STATUS

Program Status	No longer in production
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MISSION

Provide a cluster bomb weapon containing anti-personnel and anti-armor bomblets for area denial missions.



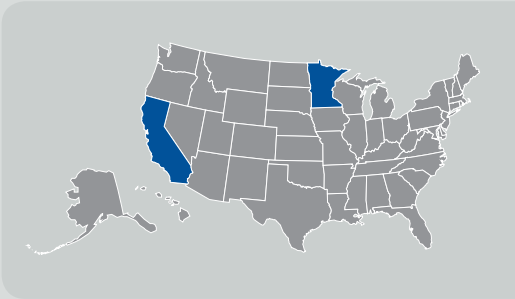
DESCRIPTION

The Cluster Bomb Unit (CBU)-89 GATOR is a cluster weapon that contains anti-personnel and anti-armor bomblets. It is designed for area denial missions. The CBU-89 GATOR dispenses 72 BLU-91 anti-tank bomblets and 22 BLU-92 anti-personnel bomblets over the target area in a circular pattern (pattern characteristics are determined by dispense conditions and winds). The CBU-89 improves combat efficiency. Using CBU-89 (and area attack weapons in general) decreases the time required to destroy necessary targets in a campaign, reduces the number of sorties required, keeps aircrews out of harm's way, and decreases the number of weapons required to accomplish the mission.



CONTRACTORS

Prime: Honeywell (MN), Aerojet (CA), General Dynamics (FL), Alliant Tech (MN)



SPECIFICATIONS

Weight	Approximately 705 lb.
Range	Ballistic/unguided weapon
Armament	Contains 72 BLU-91 anti-armor bomblets (4.31 lb. each) and 22 BLU-92 anti-personnel bomblets (3.75 lb. each)
Dimensions	Length: 92 in.; Diameter: 15.6 in.
Coverage	Coverage area (submunition pattern size) depends on many factors, but the pattern is typically circular with a diameter of about 200 feet.
Compatability	Multiple aircraft

ACQUISITION STATUS

Program Status	No longer in production
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COMBATANT COMMANDERS INTEGRATED COMMAND AND CONTROL SYSTEM (CCIC2S)

MISSION

Provide fixed command and control (C2) capabilities to support NORAD'S commander in executing aerospace warning and control missions; and the USSTRATCOM commander in executing space operations, and coordinating global missile defense missions, including support to other combatant commanders.



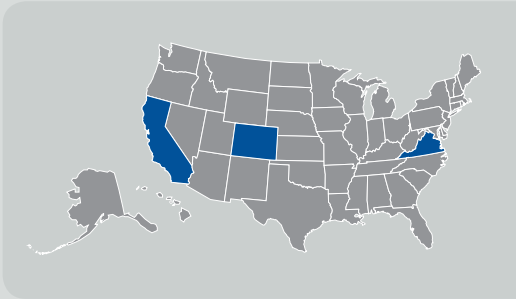
DESCRIPTION

The Combatant Commanders Integrated Command and Control System (CCIC2S) is the operational-level C2 system for Air Force space systems. For NORAD, CCIC2S provides the capabilities to command and control NORAD regions and sectors, and for USSTRATCOM, the capabilities to command and control service components. These components include: Air Force component to USSTRATCOM [JSPOC]; Naval Networks and Space Operations Command [NNSOC]; U.S. Army Space and Missile Defense Command/Army Strategic Command [SMDC/ARSTRAT]; and space wings and units in support of the space operations mission. In addition, CCIC2S capabilities support the Integrated Tactical Warning and Attack Assessment (ITW/AA) air defense and space operations situational requirements of the government of Canada, combatant commanders, governmental agencies, and international and commercial partners. The system will incorporate a standards-based approach, including Network Centric Enterprise Services. The system can be leveraged for space use. The Single Integrated Space Picture (SISP) is a project under CCIC2S and will provide command and control of space forces.



CONTRACTORS

Prime: Lockheed Martin (CO)
Subcontractor(s): Digital Net (BAE-IT) (CO) ; Northrop Grumman (Aerojet ATESC) (CA); Northrop Grumman-Electronic Systems (CA); Boeing (VA); Computer Science Corp. (VA)



SPECIFICATIONS

Interoperability

The system will incorporate a standards-based approach, including Network Centric Enterprise Services, consistent with the DoD Information Technology Standards Registry.

Standards Compliance

The system adheres to the Chairman Joint Chiefs of Staff (CJCS) ITW/AA standards. The space command and control section of CCIC2S is not ITW/AA required.

COMBAT SURVIVOR EVADER LOCATOR (CSEL)

MISSION

Provide enhanced, 24-hour assured, two-way, secure combat search and rescue satellite communication and location capabilities.



DESCRIPTION

The Combat Survivor Evader Locator (CSEL) is an Air Force-led joint program that uses precise GPS positioning and advanced anti-spoofing technologies to provide a reliable and accurate survivor location, an optimized waveform to reduce detectability, and increased probability of collection by national assets. CSEL replaces the antiquated PRC-90/-112 survivor radios with a new over-the-horizon (OTH), end-to-end system that provides assured 24-hour, two-way, secure satellite communications along with military GPS that includes anti-jamming and anti-spoofing. CSEL utilizes the international search and rescue satellite system (SARSAT) for polar-area over-the-horizon (OTH) data communications. With these new capabilities, CSEL will increase rescue force success rates in ongoing contingency operations, providing rapid and accurate location and authentication of survivor/evaders in minutes, compared to what can take days today. CSEL includes three segments: hand-held radio, OTH satellite communications, and search and rescue center computer application.

CONTRACTORS

Prime: Boeing (CA);
Subcontractor(s): Thales
Communications (MD) ;
Interstate Electronics Corp. (CA);
Senior Systems Technology (CA)



SPECIFICATIONS

Size	Width: 3 1/4 in.; Length: 8 in.; Depth: 1 3/4 in.
Weight	30.7 ounces
Range	Global coverage
Coverage	Global
Capacity/Satellite	CSEL operates with UHF satellites (UHF Follow-On: UFO; Search and Rescue Satellite: SARSAT) and national assets.
Interoperability	Interoperable with joint radios and satellites per military and commercial standards
Compatibility	Compatible with radios, satellites, and user input/output devices per military and commercial standards

ACQUISITION STATUS

Program Status	2QFY06: Full rate production approved; fielded in Army and Navy units
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MISSION

Provide the Joint Forces Air Component Commander (JFACC) with the capability to conduct theater air operations including joint, U.S., and combined operations.



DESCRIPTION

The Control and Reporting Center (CRC) is the Air Force's only 24/7 persistent deployable ground battle management command and control (BMC2) platform employed at the tactical level of war. The CRC is the most forward-based link in the Joint Battle Management Command and Control (JBMC2) family of systems. It is interoperable with other JBMC2 systems and provides a real-time shared situational awareness at the tactical level and common shared situational awareness at the operational level. The CRC conducts detailed air space management, air surveillance, aircraft identification, data link management, and theater air defense. The CRC provides the decision superiority that enables more agile, more lethal, and survivable joint operations. It may be employed by itself or in combination with other ground-based and airborne tactical C2 assets and supports a broad range of military operations.



CONTRACTORS

Prime: Thales Raytheon (CA),
Innovative Solutions Consulting (CA)



SPECIFICATIONS

Size	Numerous configurations of trucks, tents, and computer equipment
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ACQUISITION STATUS

Program Status	Post Milestone (MS) B for Increment 2a; Pre-MS B for Increment 2b
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MISSION

Protect friendly space-related capabilities from enemy attack or interference and prevent adversaries from using their space capabilities against us.



DESCRIPTION

The Counterspace Systems program is designed to meet current and future military space control needs. It supports acquisition of both the Offensive Counterspace and Defensive Counterspace systems. A current project within this program is the Counter Communications System (CCS). This is an offensive electronic warfare system designed to disrupt adversary satellite-based communications, using reversible, nondestructive means. Other projects include the Rapid Attack Identification Detection and Reporting System (RAIDRS) and Command and Control elements that are required to execute counterspace missions. RAIDRS is a defensive counterspace system designed to detect, report, identify, locate, and classify attacks against U.S. military space assets.



CONTRACTORS

Prime: CCS - Harris Corp. (FL);
Rapid Attack Identification
Detection and Reporting System,
first phase (Spiral 1) - Integral
Systems, Inc. (MD)



SPECIFICATIONS

Coverage	CCS and Deployable RAIDRS elements are transportable via C-130. RAIDRS will have worldwide coverage. CCS will provide coverage within the Joint Operating Area where it is deployed.
Interoperability	Interoperable with all space control assets

ACQUISITION STATUS

Program Status	CCS: Three Block 10 systems delivered, currently undergoing capability upgrades. Block 20 system in pre-acquisition risk reduction. RAIDRS: Spiral 1 system in development. Critical Design Review (CDR) planned for 2QFY06.
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MISSION

Conduct long-range, adverse weather, clandestine penetration of medium-to-high threat environments in politically or militarily denied areas to infiltrate, exfiltrate, and resupply Special Operations Forces (SOFs).



DESCRIPTION

The CV-22B is designed to insert and extract SOF units deep into denied areas during one period of darkness. The state-of-the-art, tilt-rotor platform combines the vertical takeoff and landing capability of a helicopter with the long-range, high-speed performance of a fixed-wing aircraft. The CV-22B variant of the V-22 will feature a multimode terrain-following/terrain-avoidance radar, radar and infrared warning and countermeasure systems, additional fuel tanks, and upgraded communications and navigation systems.

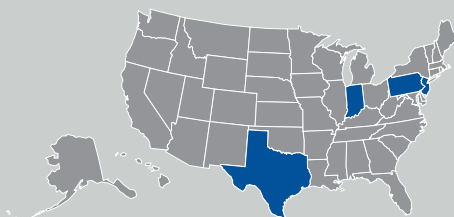


CONTRACTORS

Prime: Bell/Boeing (joint venture between Bell/Textron, TX, and Boeing ADS, PA)

Subcontractor(s): Propulsion

- Rolls Royce (IN); TF/TA Radar
- Raytheon (TX); Electronic Warfare Suite - ITT Avionics (NJ)



SPECIFICATIONS

Weight	Empty: 35,800 lb.; Max Vertical Takeoff: 52,600 lb.; Short Takeoff: 57,000 lb.; Self-Deploy Weight: 60,500 lb.
Range	500 nautical miles (NM) (unlimited with aerial refueling)
Dimensions	Wingspan: 45.8 ft.; Length: 57.3 ft.; Height: 22.1 ft.; Rotors tip-to-tip: 84.6 ft.
Service Ceiling	25,000 ft.
Speed	230 knots cruise
Payload	20,000 lb. internal or 10,000 lb. external with minimum fuel
Passenger Capacity	18 Special Operations Forces troops

ACQUISITION STATUS

Program Status	In September 2005, the V-22 program was approved to start full-rate production. CV-22B is undergoing Block 10 developmental testing at Edwards AFB. An Operational Utility Evaluation is planned for June 2006 to certify readiness for training operations at Kirtland AFB. Block 10 Initial Operational Testing & Evaluation (IOT&E) is planned for October 2007 to certify operational readiness. The projected inventory will be 50. The Initial Operational Capability phase is planned for 2009.
Unit Assignment	71st Special Operations Squadron, Kirtland AFB, NM
Current Inventory	Two Production Representative Test Vehicles
Future Upgrades	Block 20 planned for start. Upgrades will include: Emergency/Reserve Power, tactical air data link, communications upgrades, CNS/ATM Phase II, high-altitude conversion operations, Terrain Following/Terrain Avoidance (TF/TA) radar enhancement

MISSION

Provide global visible and infrared cloud cover imagery and other atmospheric, oceanographic, land surface, and space environment data to support multi-service requirements and battlespace characterization everywhere that U.S. forces operate.



DESCRIPTION

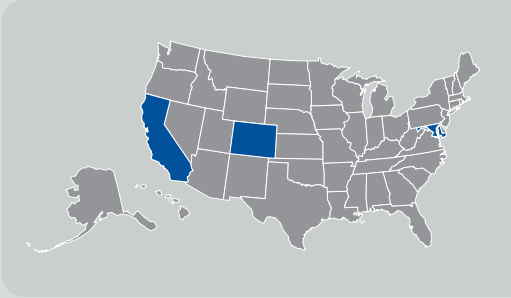
The Defense Meteorological Satellite Program (DMSP) designs, builds, launches, and maintains satellites monitoring the meteorological, oceanographic, and solar-terrestrial physics environments. Using the DMSP data, military weather forecasters can detect developing patterns of weather and track existing weather systems over remote areas, including the presence of severe thunderstorms, hurricanes, and typhoons. This data is vital to the effective employment of forces and weapon systems worldwide. The program includes five satellites flying in two sun-synchronous orbits. The primary weather sensor on DMSP is the Operational Linescan System, which provides continuous visual and infrared imagery of cloud cover over an area 1,600 nautical miles wide. Additional satellite sensors measure atmospheric vertical profiles of moisture and temperature. The DMSP satellites also measure local charged particles and electromagnetic fields to assess the impact of the ionosphere of ballistic-missile early warning radar systems and long-range communications.



CONTRACTORS

Prime: Spacecraft - Lockheed Martin (CA); Sensors - Northrop Grumman (MD)

Subcontractors: Sensor - Northrop Grumman (CA); Sensor Support/Service - Raytheon (CO); Flight Software Independent Verification and Validation (IV&V) - Integral Systems, Inc. (MD)



SPECIFICATIONS

Weight	2720.1 lb.
Range	Polar-orbiting at 450 nautical miles (NM)
Dimensions	14.1 ft. long (4.29 m) without solar panels deployed
Coverage	Full global coverage every 12 hours
Capacity/Satellite	Launched on a medium Evolved Expendable Launch Vehicle
Interoperability	Air Force Weather Agency ensures DMSP data is interoperable with a broad range of user platforms.
Compatability	Air Force Weather Agency ensures DMSP data is compatible with a broad range of user platforms.

ACQUISITION STATUS

Program Status	All DMSP satellites have been delivered
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MISSION

Provide super-high frequency satellite communications to troops in the field as well as commanders at multiple locations worldwide.



DESCRIPTION

The Defense Satellite Communications Systems (DSCS) is the workhorse of military satellite communications. The system provides uninterrupted secure voice and high rate data communications to DoD users for monitoring events and deploying and sustaining forces anywhere in the world. It is used for high-priority command and control communication such as the exchange of wartime information between defense officials and battlefield commanders. The military also uses DSCS to transmit space operations and early warning data to various systems and users.

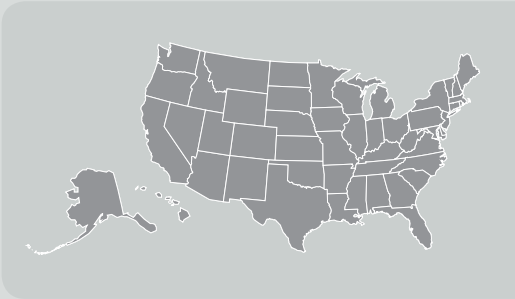
The system consists of 13 Phase III DSCS satellites that orbit the earth at an altitude of more than 22,000 miles. Each satellite uses six super high frequency transponder channels capable of providing secure voice and high data rate communications. The system also features a single-channel transponder for disseminating emergency action and force direction messages to nuclear-capable forces. The single steerable dish antenna provides an increased power spot beam which can be tailored to suit the needs of different size user terminals. DSCS satellites can resist jamming and consistently exceed their 10-year design life.

DSCS users operate on the ground, at sea, or in the air. Members of the 50th Space Wing's 3rd Space Operations Squadron at Schriever Air Force Base, CO, provide satellite command and control support for all DSCS satellites.



CONTRACTORS

Prime: Lockheed Martin Missiles and Space (global)



SPECIFICATIONS

Weight	2,716 lb. (1,232 kg)
Range	Capability to orbit the earth at an altitude of more than 22,000 miles
Dimensions	Length: 6 ft. (1.8 m); Height: 6 ft. (1.8 m); Width: 7 ft. (2.1 m); 38-ft. span (11.5 m) with solar arrays deployed
Coverage	65° N to 65° S
Capacity/Satellite	Five satellite (primary) constellation in geosynchronous orbit, with four residual satellites

ACQUISITION STATUS

Program Status	Complete
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MISSION

Provide all-weather surveillance, command, control, and communications needed by commanders of U.S., NATO, and other allied air defense forces.



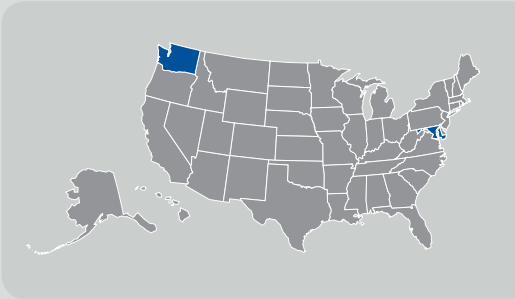
DESCRIPTION

The E-3 Sentry Airborne Warning and Control System (AWACS) aircraft provides responsive and flexible real-time command and control/battle management in support of worldwide operational employment of U.S. and coalition forces. AWACS provides persistent and survivable surveillance, battle management, weapons control, threat warning, and combat ID information in support of commander taskings. It gives commanders a self-contained and worldwide, around-the-clock capability to prosecute air and ground campaigns. The E-3 Sentry is a modified Boeing 707/320 commercial airframe with a rotating radar dome. The radar combined with an identification friend or foe subsystem can look down to detect, identify, and track enemy and friendly low-flying aircraft by eliminating ground clutter returns that confuse other radar systems. Other major subsystems in the E-3 include navigation, communications, computers (data processing), and displays.



CONTRACTORS

Prime: Boeing Aerospace Co. (WA)
Subcontractor(s): Northrop
Grumman (MD)



SPECIFICATIONS

Size	Length: 145 ft., 8 in. (44 m); Wingspan: 130 ft., 10 in. (39.7 m); Height: 41 ft., 4 in. (12.5 m)
Weight	347,000 lb. (156,150 kg)
Range	More than eight hours (unrefueled)
Coverage	The radar has a range of more than 250 miles (375.5 km) for low-flying targets and farther for aerospace vehicles flying at medium to high altitudes

ACQUISITION STATUS

Program Status	<p>The Radar System Improvement Program (RSIP) was completed in February of 2005. Installation of RSIP enhanced the operational capability of the E-3 radar electronic counter-measures, and improved the system's reliability, maintainability, and availability.</p> <p>The AWACS Block 40/45 Upgrade is in the middle of System Development and Demonstration (SDD). It includes several projects aimed at reducing operator workload, providing a fused air picture to the warfighter, and transmitting that air picture off-board in a more timely manner.</p>
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MISSION

Provide a highly survivable, airborne command, control, and communications center to direct U.S. forces, execute emergency war orders, and coordinate actions by civil authorities in case of national emergency or destruction of ground control command centers.

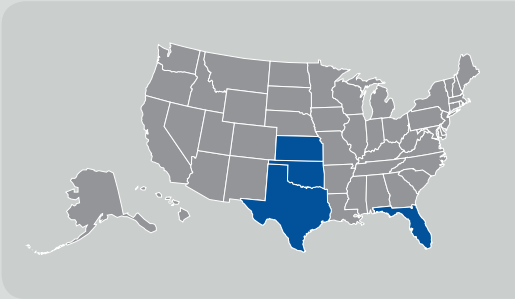


DESCRIPTION

The E-4B aircraft, which is being manned, equipped, and operated collaboratively by the U.S. Strategic Command (USSTRATCOM) and the Joint Chiefs of Staff (JCS), provides a mobile, airborne command post with a wide range and depth of communications capabilities unique to this aircraft. The E-4B is a four-engine, swept-wing, long-range, high-altitude airplane capable of being refueled in flight. It features electromagnetic pulse protection, and electrical systems designed to support advanced electronics, and an array of new communications equipment. An advanced satellite communications system improves worldwide communications among strategic and tactical satellite systems and the Airborne Operations Center.

CONTRACTORS

Prime: Boeing Wichita Development and Modernization Center (KS)
Subcontractors: Raytheon (FL); Rockwell Automation (TX); L-3 Communications (TX); Boeing Aerospace Operations (OK)



SPECIFICATIONS

Weight	Maximum Gross Taxi Weight: 803,000 lb.; Maximum Takeoff Weight: 800,000 lb.; Dry Weight: 526,500 lb.
Range	72 hours with mid-air refueling
Armament	None
Dimensions	Height: 63 ft., 5 in.; Length: 231 ft., 4 in.; Width: 195 ft., 8 in.
Coverage	Global
Capacity/Satellite	Satellite Connectivity: Defense Satellite Communications System; Milstar; MILSATCOMs; Connexions by Boeing broadband internet access; Inmarsat satellite network; AT&T SATSTAR Other Unique Connectivity: Northstar Ground Entry Point UHF Comms
Interoperability	Enables worldwide communication among strategic and tactical satellite systems and the Airborne Operations Center
Compatability	Yes

ACQUISITION STATUS

Program Status	Fielded
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MISSION

Provide surveillance of fixed and moving ground targets to assess the enemy situation and to support location, tracking, targeting, and attack operations. These functions support the primary mission of Joint STARS—to provide dedicated support to ground and air theater commanders.



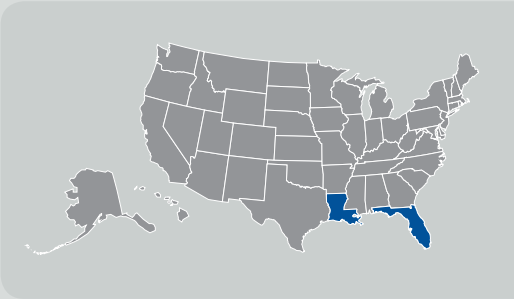
DESCRIPTION

The E-8C Joint Surveillance Target Attack Radar System (Joint STARS) is an airborne battle management and command and control (C2) platform that provides long-endurance, all weather surveillance and targeting information on moving and stationary targets via Ground Moving Target Indicator (GMTI) and Synthetic Aperture Radar (SAR) technologies. It sends GMTI and SAR data to shooters and Common Ground Stations to enhance combatant commanders' battle management and situational awareness.



CONTRACTORS

Prime: Northrop Grumman (FL, LA)



SPECIFICATIONS

Weight	336,000 lb. (gross weight)
Range	8 hours, 20 hours with in-flight refueling
Dimensions	Wingspan: 130 ft., 10 in.; Height: 42 ft., 6 in.; Length: 152 ft., 11 in.
Coverage	For Official Use Only-(not releasable)
Capacity/Satellite	Three Demand Assigned Multiple Access (DAMA) SATCOM radios
Interoperability	Enables communications and datalink information sharing with various U.S., UK, and coalition assets

ACQUISITION STATUS

Program Status	Post Milestone C; Modification and sustainment
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MISSION

Provide a quickly deployable, mobile, survivable, forward-based cruise missile defense capability enabling joint rapid decision-making to shorten the warfighter's response time.



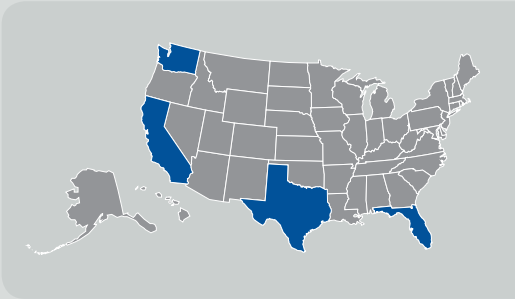
DESCRIPTION

The E-10A combines the next generation wide area surveillance sensor with Battle Management Command and Control (C2) on a wide body platform. It delivers Special Planning Group (SPG)-directed, and Joint Requirements Oversight Council (JROC)-approved, cruise missile defense capabilities to the joint warfighter. The E-10A is designed to provide a near real-time, horizontally integrated view of the air and surface battlespace using advanced sensors, network centric warfare, and high-speed, wideband communications systems. The E-10A is a key enabler of the joint theater air and missile defense architecture: It fields the next-generation Ground Surveillance (both Ground Moving Target Indicator (GMTI) and Synthetic Aperture Radar (SAR) imaging) and focused Air Moving Target Indicator (AMTI) radar capability enabling full cruise missile defense support at very long ranges with weapons quality target cueing, facilitating rapid decision-making and shortening joint kill chains.



CONTRACTORS

Prime: Northrop Grumman (FL)
Subcontractor(s): Northrop Grumman (FL), Raytheon (CA), Boeing (WA), L-3 Communications (TX)



SPECIFICATIONS

Weight	430,000 lb. (maximum takeoff weight)
Range	11.5 hours time-on-station at 400 nautical miles (NM) operating radius
Dimensions	Modified Boeing 767-400ER - Wingspan: 170 ft.; Length: 201 ft.; Height: 55 ft.
Coverage	The E-10A's radar coverage is Line of Sight (LOS). Expected surface coverage is out to greater than 230 NM from its orbit. Typical joint employment would provide sustained coverage of an Army Corps-sized Ground Reference Coverage Area (GRCA) of more than 11,000 square miles. Aerial coverage against all targets is in excess of 275 NM. The Joint Forces Commander may dynamically position E-10A to provide coverage as the battle flows, or to support Special Operations, Littoral Campaigns, and/or Time-Sensitive Targeting.
Interoperability	Fully joint and combined interoperable
Compatability	Fully network-centric capable. DoD leader in advanced communications. Also provides for communications with non-net-ready legacy and/or allied systems employment.

ACQUISITION STATUS

Program Status	Technology Development (pre-System Development and Demonstration (SDD))
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MISSION

Conduct electronic attack and offensive information warfare from a stand-off jamming platform.

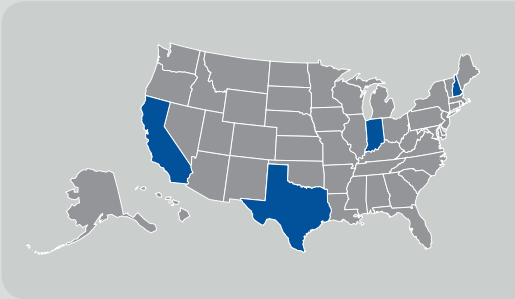


DESCRIPTION

The EC-130H Compass Call is the DoD's premier Electronic Attack and Information Warfare weapon system. Compass Call's mission is to counter advanced command, control, and communication (C3) systems and conduct stand-off jamming of air defense radars. Its primary role is to increase the survivability of combat aircraft and aircrews by denying effective command and control of the enemy Integrated Air Defense System (IADS), and disrupting air defense surface-to-air missile (SAM) and anti-aircraft artillery (AAA) threats. Compass Call also supports ground and special operations forces by denying hostile forces and terrorists the communications and situational awareness needed to coordinate operations against U.S. and allied troops. Compass Call is a core component of the Joint Airborne Electronic Attack system of systems. With the ability to be quickly modified to counter new threats and targets, this versatile platform is able to bring essential capabilities to virtually any combat operation.

CONTRACTORS

Prime: L-3 Communications (TX);
BAE Systems (NH)
Subcontractor(s): Raytheon
Systems Corporation (IN); General
Dynamics (CA)



SPECIFICATIONS

Size	Length: 100 ft.; Wingspan: 132 ft. 7 in.; Height: 38 ft. 3 in.
Weight	Maximum takeoff weight: 155,000 lb.
Range	Unlimited (air refuelable)
Coverage	Line-of-sight

EVOLVED EXPENDABLE LAUNCH VEHICLE (EELV)

MISSION

Provide military, civilian, and commercial users a significantly more flexible, less costly, medium- to heavy-lift launch capability for placing large payloads into orbit.



DESCRIPTION

The Evolved Expendable Launch Vehicle (EELV) is composed of two families of launch vehicles—the Atlas V and the Delta IV—with the capability to accommodate light, medium, and heavy payloads for all users. The EELV system includes all equipment, facilities, and launch base infrastructure necessary to launch a payload, place it in the required delivery orbit, provide specified environments, provide EELV system maintenance, and perform any necessary recovery/refurbishment operations.

CONTRACTORS

Prime: Boeing (CA, AL, TX, FL);

Lockheed Martin (CO, CA, TX, FL)

Subcontractor(s): Pratt & Whitney

(FL); Alliant Techsystems; Mit-

subishi Heavy Industries (Japan):

B.F. Goodrich (NM); Aerospace (CA):

Allied Signal Aerospace (AZ); KAMAG

(Germany); Aerojet (CA); Keystone

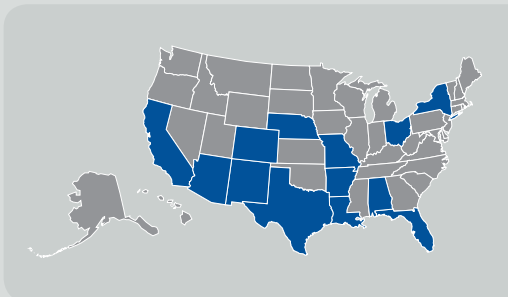
Engineering (LA); GDE Systems (CA);

Arrowhead Products (CA):

La Barge (AR); Honeywell (FL); Contraves (Switzerland); NPO Energomash (Russia);

Moog Inc. (NY); Cincinnati Electronics (OH); United Engineering Co (MO); Lincoln

Composites (NE)



SPECIFICATIONS

Size	Medium, intermediate, and heavy lift vehicles
Range	All required satellite orbits
Coverage	All required space orbits
Capacity/Satellite	Lb. to orbit range: 2,500 lb.–48,260 lb. Range will vary depending on orbit, vehicle, and vehicle configuration.
Interoperability	Capability to launch from both coasts
Compatibility	Standard interface allows all DoD, NASA, and commercial payloads to launch on EELV.

ACQUISITION STATUS

Program Status	Program currently in full-rate production
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MISSION

Provide better, more efficient, and less expensive logistics support to warfighters.

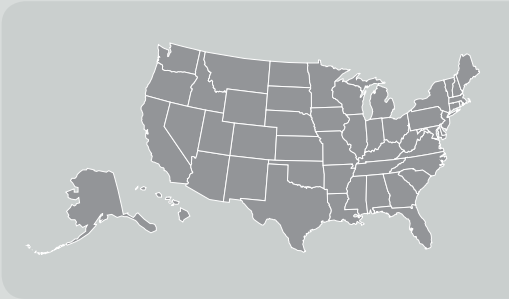
DESCRIPTION

The Expeditionary Combat Support System (ECSS) will enable the implementation of the Air Force e-Log 21 vision. The program will reduce the need for over 500 legacy systems while improving logistics processes within the Air Force Enterprise. The transformation will involve the following elements: acquiring a preferred Air Force Enterprise Resources Planning (ERP) system and selected commercial-off-the-shelf (COTS) “bolt-ons” plus a Software Integrator; overseeing the blueprinting, configuration, implementation, and roll-out of acquisition phases; and ensuring that world class technical/integration, change management, training, and program management processes and concepts are incorporated into the acquisition. ECSS will enable the Air Force to standardize processes and reduce legacy systems within the Air Force Enterprise, with the goal of creating efficiencies. The Air Force logistics community is the major implementer of the ECSS ERP.



CONTRACTORS

To be determined



ACQUISITION STATUS

Program Status	Milestone A
Future Upgrades	TBD

F-15A–D EAGLE

MISSION

Provide an all-weather, extremely maneuverable, tactical fighter to gain and maintain air supremacy over the battlefield.



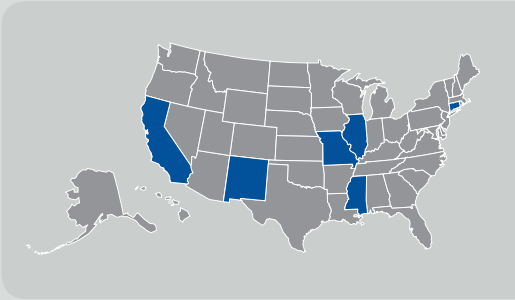
DESCRIPTION

The F-15A–D Eagle is designed to perform air-to-air missions with uncompromising performance. An array of avionics and electronic systems enables the F-15A–D to fight at all altitudes, day or night, and in all types of weather. The F-15A–D augments the F-22A as a proven air superiority aircraft employing all of the Air Force's air-to-air munitions.



CONTRACTORS

Prime: Boeing Aircraft (MO)
Subcontractor(s): **Engine** - Pratt & Whitney (CT); **Radar** - Raytheon (MS, CA); **Avionics** - Honeywell (NM), Northrop Grumman (IL)



SPECIFICATIONS

Weight	68,000 lb. (C/D maximum takeoff weight)
Range	3,450 mile ferry range with conformal fuel tanks and three external fuel tanks
Armament	One 20mm multi-barrel gun mounted internally with 940 rounds of ammunition; four AIM-9M/X Sidewinder and four AIM-7M Sparrow air-to-air missiles, or eight AIM-120 AMRAAMs, carried externally
Dimensions	Wingspan: 42.8 ft.; Length: 63.8 ft.; Height: 18.5 ft.
Speed	Mach 2.5 plus
Service Ceiling	50,000 ft.
Power Plant	Two Pratt & Whitney F100-PW-100 or 220 turbofan engines with afterburners
Thrust	23,450 lb. each engine
Crew	F-15A/C: one; F-15B/D: two

ACQUISITION STATUS

Program Status	Modernization and sustainment
Current Inventory	Active force, 359; Air National Guard, 140
Future Upgrades	Upgrades to the F-15A–D will maintain the aircraft’s operational effectiveness through 2025+, and will include active electronically scanned array radar, a digital electronic warfare suite, and a helmet mounted cueing system.

MISSION

Perform air-to-air and air-to-ground missions; fight at low altitude, day or night, and in all weather.



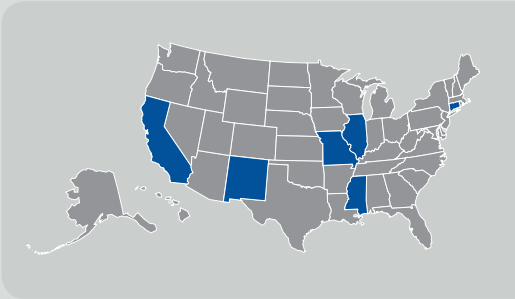
DESCRIPTION

The F-15E Strike Eagle is a dual-role fighter designed to perform air-to-air and air-to-ground missions. An array of avionics and electronics systems enables the F-15E to fight at low altitude, day or night, and in all types of weather. The F-15E is the Air Force's only all-weather deep interdiction fighter aircraft. It provides night/through-the-weather, air-to-surface attack and employs all of the Air Force's precision-guided munitions.



CONTRACTORS

Prime: Boeing Aircraft (MO)
Subcontractor(s): **Engine** - Pratt & Whitney (CT); **Radar** - Raytheon (MS, CA); **Avionics** - Honeywell (NM); **Avionics** - Northrop Grumman (IL)



SPECIFICATIONS

Weight	81,000 lb. (maximum takeoff weight)
Range	2,400 mi. ferry range with conformal fuel tanks and three external fuel tanks
Armament	One 20mm multi-barrel gun mounted internally with 500 rounds of ammunition; four AIM-7F/M Sparrow missiles and four AIM-9L/M Sidewinder missiles, or eight AIM-120 Advanced Medium Range Air-to-Air Missile (AMRAAM) missiles; virtually all of the air-to-surface weapon in the Air Force inventory (nuclear and conventional)
Dimensions	Wingspan: 42.8 ft.; Length: 63.8 ft.; Height: 18.5 ft.
Speed	Mach 2.5 plus
Service Ceiling	50,000 ft.
Power Plant	Two Pratt & Whitney F100-PW-220 or 229 turbofan engines with afterburners
Thrust	25,000–29,000 lb. each engine
Crew	Pilot and weapon systems officer

ACQUISITION STATUS

Program Status	Modernization and sustainment
Current Inventory	Active force, 224; Air National Guard, 0; Reserve, 0
Future Upgrades	Upgrades to the F-15E will maintain the aircraft's operational effectiveness through 2030+, and will include an active electronically scanned array radar, a digital electronic warfare suite, and a helmet mounted cueing system

MISSION

Provide low-cost, high-performance, air-to-air combat and air-to-surface attack capability.



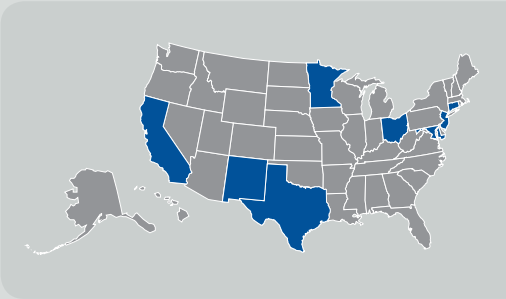
DESCRIPTION

The F-16 Fighting Falcon is a compact, maneuverable, multi-role fighter aircraft that is proven in air-to-air combat and air-to-surface attack. The F-16's maneuverability and combat radius (distance it can fly to enter air combat, stay, fight and return) exceed that of potential threat fighter aircraft. It can locate targets in all weather conditions and detect low flying aircraft in radar ground clutter. In an air-to-surface role, the F-16 can fly more than 500 miles (860 km), deliver its weapons with superior accuracy, defend itself against enemy aircraft, and return to its starting point. In designing the F-16, advanced aerospace science and proven reliable systems from other aircraft such as the F-15 and F-111 were selected and combined to simplify the airplane and reduce its size, purchase price, maintenance costs and weight. Fully fueled, the F-16 can withstand up to nine G's—nine times the force of gravity. Avionics systems include a highly accurate inertial navigation system coupled with a GPS by which a computer provides steering information to the pilot. The plane has UHF and VHF radios, instrument landing system, a warning system, and modular countermeasure pods to be used against airborne or surface electronic threats. During Operation Iraqi Freedom (OIF) the F-16 continued its superior performance in precision strike missions using a variety of GPS and laser guided weapons. Currently, the F-16 comprises 53 percent of the Air Force fighter force structure and provides 67 percent of the precision guided munitions capability in our Air Expeditionary Forces.



CONTRACTORS

Prime: **Airframe** - Lockheed Martin (TX); **Engines** - Pratt & Whitney (CT); General Electric (OH)
Subcontractors: Northrop Grumman (MD); Raytheon (TX); Israel Aircraft Industries (Israel), Honeywell International (CA, NJ, NM, MN)



SPECIFICATIONS

Weight	37,500 lb. (16,875 kg)
Range	More than 2,000 mi. ferry range (1,740 nautical miles)
Armament	One M-61A1 20mm multibarrel cannon with 500 rounds; external stations can carry up to six air-to-air missiles, conventional air-to-air and air-to-surface munitions and electronic countermeasure pods.
Dimensions	Length: 49 ft., 5 in. (14.8 m); Height: 16 ft. (4.8 m); Wingspan: 32 ft., 8 in. (9.8 m)
Service Ceiling	Above 50,000 ft. (15 km)
Power Plant	F-16C/D: one Pratt & Whitney F100-PW-200/220/229 or General Electric F110-GE-100/129
Thrust	F-16C/D, 28,500 lb.
Crew	F-16C, one; F-16D, one or two

ACQUISITION STATUS

Program Status	Sustainment, no new aircraft procurement planned at this time
Unit Assignment	Active Air Force, Reserves, and Air National Guard
Current Inventory	Active Force, F-16C/D, 714; Reserve, F-16 C/D, 69; and Air National Guard, F-16 C/D, 472
Future Upgrades	Major structural integrity modifications to the airframe and engines to extend the service life, and avionics modifications for performance improvements and weapons compatibility

F-16 HARM TARGETING SYSTEM (HTS) R6 AND R7

MISSION

Provides F-16 aircraft with the capability of real-time targeting of enemy air defense system threats.



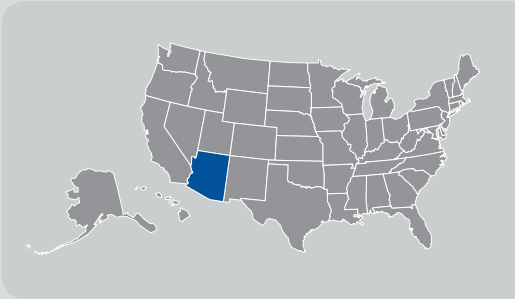
DESCRIPTION

The F-16 High-Speed Anti-Radiation Missile (HARM) targeting system detects and provides targeting information on enemy air defense radar outside the lethal range of their associated surface-to-air missiles (SAM). The system supports the F-16's Suppression/Destruction of Enemy Air Defenses (SEAD/DEAD) mission. The HARM Targeting System (HTS) enables employment of the AGM-88 HARM in the "range known" mode—the missile's most lethal mode. HTS targeting information increases HARM lethal range by 25 percent and increases the probability of hitting the target radar. The HTS Release 7 version will provide precision targeting needed for accurate employment of GPS-aided munitions as well as HARM, with increased situational awareness and detection range.



CONTRACTORS

Prime: Raytheon Missile Systems (AZ)



SPECIFICATIONS

Weight	R6 - 90 lb.; R7 - 114 lb. maximum
Dimensions	Length: 56 in.; Diameter: 8 in.

ACQUISITION STATUS

Program Status	F-16 HTS is operational at six locations (nine active duty and one guard squadron); all are currently equipped with HTS Release 6 (R6) hardware and software.
Unit Assignment	Shaw AFB, SC; Mountain Home AFB, ID; Cannon AFB, NM; Misawa AB, Japan; Spangdahlem AB, Germany; and McEntire Air National Guard Base (ANGB), SC
Current Inventory	205 pods (includes 11 non-operational test units)
Future Upgrades	HTS Release 7 (R7) modification adds Precision Geolocation Targeting and dual carriage of HTS with Advanced Targeting Pods (SNIPER) in FY07. Future pod and modification requirements include the following: Retrofit kit (modification) contract awarded in FY05 to purchase kits to modify 83 HTS R6 pods to HTS R7. In FY06, contracts are planned for install of the 83 kits purchased in FY05 and to buy 124 kits to complete the current inventory of HTS R6 pods. In FY07, installation of the remaining 117 kits are planned.

F16-TARS (THEATER AIRBORNE RECONNAISSANCE SYSTEM)

MISSION

Provide warfighting theaters with organic, survivable, and responsive penetrating tactical reconnaissance that gathers timely, high-quality imagery intelligence data for use by commanders in the air-land battle.



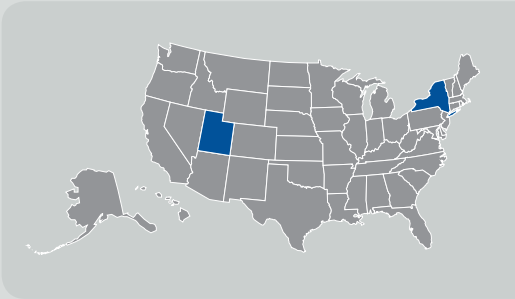
DESCRIPTION

The F16-TARS (Theater Airborne Reconnaissance System) consists of a removable pod uploaded to F-16C Block 25/30/32 aircraft. TARS is the Air Force's only high-speed, penetrating, under-the-weather, theater-controlled, reconnaissance capability. In the span of a single engagement, it provides unique rapid strike and reconnaissance in a high-threat environment. Per the 2004 operational requirements document and as repeatedly requested by CENTAF, TARS must provide near-real-time imagery transmission to forces on the ground, allowing immediate response to threats and BDA. Continuously deployed in Iraq since May 2005, TARS has significantly increased imagery available in Operation Iraqi Freedom (OIF) by producing over 4,000 images for CENTCOM in support of infantry and special operations personnel engaged in counter-insurgent pre-raid planning, IED detection convoy support, time-sensitive targeting and battle damage assessment (BDA). Data link capability will begin limited fielding in FY07.



CONTRACTORS

Prime: BAE (NY); L-3 Communica-
tions (UT)



SPECIFICATIONS

Size	162 in. x 29 in. x 28.5 in.
Weight	1,200 lb.
Coverage	Digital Electro-Optical Sensor
Capacity/Satellite	20 Pods - 10 Forward Framing Sensor (FFS); 10 with Medium Altitude Electro-Optical and FFS;

ACQUISITION STATUS

Program Status	Sustainment
Future Upgrades	Datalink for near-real-time data transmission

F-22A RAPTOR

MISSION

Perform both air-to-air and air-to-ground missions enabling full realization of operational concepts vital to the 21st century Air Force.



DESCRIPTION

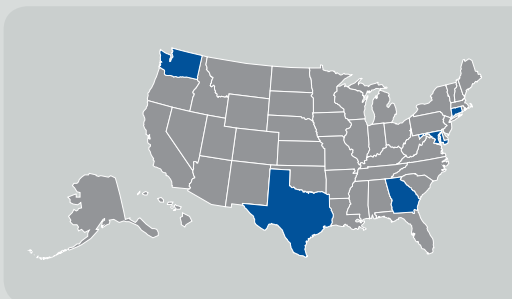
The F-22A Raptor is the Air Force's newest fighter aircraft. Its combination of stealth, supercruise, maneuverability, and integrated avionics, coupled with improved supportability, represents an exponential leap in warfighting capabilities. The F-22A is a critical component of the Global Strike Task Force. It is designed to project air dominance rapidly at great distances and to defeat threats attempting to deny access to our nation's Joint Forces.



CONTRACTORS

Prime: Center Fuselage, Final Assembly, and overall System Integration - Lockheed Martin-Aero (GA); Mid Fuselage - Lockheed Martin-Aero (TX); Aft Fuselage and Wings - Boeing (WA); Propulsion - Pratt & Whitney (CT)

Subcontractor(s): Radar - Northrop Grumman (MD)



SPECIFICATIONS

Weight	63,634 lb.
Range	425 nautical miles (NM)
Armament	One M61A2 20-millimeter cannon; Payload: 480 20mm rounds for the gun; side weapon bays can carry two AIM-9 infrared (heat seeking) air-to-air missiles; main weapon bays can carry (air-to-air loadout) six AIM-120 radar-guided air-to-air missiles or (air-to-ground loadout) two 1,000-lb. GBU-32 JDAMs and two AIM-120 radar-guided air-to-air missiles.
Dimensions	Length: 62 ft., 1 in. (18.9 m); Height: 16 ft., 8 in. (5.1 m); Wingspan: 44 ft., 6 in. (13.6 m)
Service Ceiling	Above 50,000 ft. (approximately 15 km)
Speed	Mach 2 class

ACQUISITION STATUS

Program Status	Full Rate Production, 24 in production to be delivered to Langley through 2006; last delivery in 2011; projected inventory - 183
Unit Assignment	Edwards AFB, CA; Nellis AFB, NV; Tyndall AFB, FL; Future Unit Assignment: Elmendorf AFB, AK
Current Inventory	63
Future Upgrades	Integration of Small Diameter Bomb (SDB), Enhanced Air-to-Ground Radar, Enhanced Intelligence, Surveillance, and Reconnaissance (ISR) capabilities

MISSION

Provide all-weather, precision, stealthy, air-to-ground strike capability, including direct attack on the most lethal surface-to-air missiles (SAMs) and air defenses; meet the requirements of the three U.S. Services, the UK, and other allies.



DESCRIPTION

The F-35 Joint Strike Fighter (JSF) program will develop and deploy an affordable, next-generation, stealthy, multi-role strike fighter aircraft. The Conventional Takeoff and Landing (CTOL) F-35 will be used to support the Air Force core competencies of Air and Space Superiority, Global Attack, Precision Engagement, and Agile Combat Support. The F-35 will complement a force structure that includes fighter, bomber, and support assets operating in an environment with F-22A and within the projected Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) architecture. The F-35 capitalizes on system commonality and modularity, maximizing affordability and logistical support for 21st century AEF employment. The service versions of the F-35 include the following:

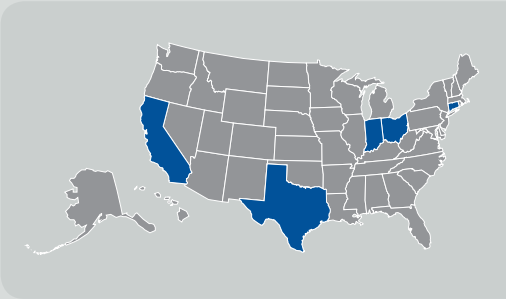
- USAF: F-35A CTOL, stealthy, multi-role aircraft (primary air-to-ground) to replace the F-16 and A-10 and complement the F-22A
- USMC: F-35B (Short Takeoff and Vertical Landing (STOVL)), stealthy, multi-role strike fighter to replace the AV-8B and F/A-18
- USN: F-35C (Carrier Version (CV)), stealthy, multi-role strike fighter to complement the F/A-18E/F
- UK: F-35B STOVL aircraft to replace the Sea Harrier and GR-7



CONTRACTORS

Prime: **Airframe** - Lockheed Martin (TX); **F135 Engine** - Pratt & Whitney (CT); **F136 Engine** - General Electric/Rolls-Royce Fighter Engine Team (OH, IN)

Subcontractors: **Center Fuselage** - Northrop Grumman (CA); **Aft Fuselage and Tails** - BAE (UK); **Lift System Components** - Rolls-Royce (UK, IN)



SPECIFICATIONS

Weight	28,900 lb.
Range	Threshold: 590 nautical miles (NM); Objective: 690 nm
Armament	Payload - Internal: Two AIM-120C Advanced Medium Range Air-to-Air Missiles (AMRAAM); Two 2,000 lb. class (Joint Direct Attack Munition (JDAM), Wind Corrected Munition Dispenser (WCMD), Guided Bomb Unit (GBU), Cluster Bomb Unit (CBU), Joint Stand-off Weapon (SOW); Small Diameter Bomb; GAU-12 25mm gun; External: AIM-9X; Mk-82, 83, 84 family of JDAM and Laser Guided Bombs; AGM-158 Joint Air-to-Surface Standoff Missile (JASSM)
Dimensions	Wingspan: 35 ft.; Length: 51.1 ft.; Wing Area: 460 square ft.
"G"	+9.0/-3.0
Speed	Level Flight - 1.5 Mach > 30,000 ft.; Design Max - 700 KCAS/1.6 Mach

ACQUISITION STATUS

Program Status	System Development and Demonstration (SDD); Production begins in 2007 with deliveries in 2009 - 2028; Projected inventories - 1763 CTOL variants for USAF; 680 STOVL/CV variants for the Navy and Marine Corps
Unit Assignment	TBD
Current Inventory	0

MISSION

Penetrate high-threat air space, using low-observable stealth technology and conduct precision strikes against critical, robustly defended targets.



DESCRIPTION

The F-117 Nighthawk is the world's first operational aircraft designed to exploit low-observable stealth technology and to use laser-guided and GPS-guided weapons against critical targets. The unique design of the single-seat F-117 provides exceptional combat capabilities. About the size of an F-15 Eagle, the twin-engine F-117 aircraft is powered by two General Electric F404 turbofan engines and has quadruple redundant fly-by-wire flight controls. Air-refuelable, the F-117 supports worldwide commitments and adds to the deterrent strength of U.S. military forces.

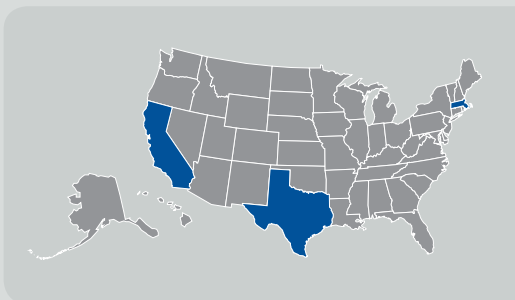


CONTRACTORS

Prime: Airframe/Contractor
Logistics Support - Lockheed
Martin (CA)

Subcontractor(s): Engines -
General Electric (MA); IRADS -
Raytheon-Texas Instruments (TX);

Weapon System Trainer -
L-3 Communications (TX)



SPECIFICATIONS

Weight	52,500 lb. (23,625 kg)
Range	Unlimited with air refueling
Armament	Internal weapons carriage: GBU-27; EGBU-27; Laser GBU-10/12; Various cluster bomb munitions (CBUs)
Dimensions	Length: 63 ft., 9 in. (19.4 m); Height: 12 ft., 9.5 in. (3.9 m); Wingspan: 43 ft., 4 in. (13.2 m)
Interoperability	Participates as key member of integrated strike packages
Service Ceiling	35,000 ft.
Power Plant	Two GE-404, non-augmented engines, each with 9,040 lb. of thrust
Speed	Sub-sonic (0.9 Mach)

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	49th Flight Wing, Holloman AFB, NM
Current Inventory	52 F-117; two YF-117
Future Upgrades	Common Data Recorder; Infrared Acquisition and Designation System (IRADS); Color Multipurpose Display Indicator

MISSION

Provide the warfighter with accurate weapons delivery in adverse weather from medium/high altitudes.



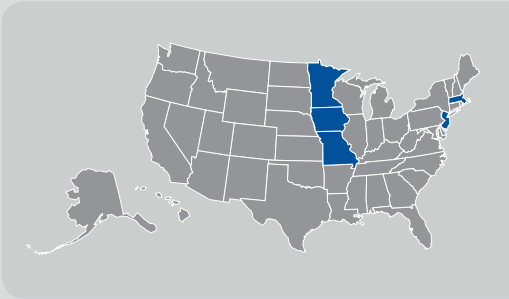
DESCRIPTION

The GBU-31/32/38 Joint Direct Attack Munition (JDAM) upgrades the existing inventory of general purpose bombs by integrating them with a GPS/inertial navigational system (INS) guidance kit. With the addition of a new tail section that contains INS and a GPS guidance control unit, JDAM improves the accuracy of unguided, general purpose bombs in any weather condition. JDAM can be launched from very low to very high altitudes in a dive, toss, and loft or in straight and level flight with an on-axis or off-axis delivery. JDAM enables multiple weapons to be directed against single or multiple targets on a single pass. JDAM became the warfighters' "weapon of choice" in the Kosovo, Afghanistan, and Iraq air-to-ground campaigns.



CONTRACTORS

Prime: Boeing (MO)
Subcontractors: Tail Actuator System - Textron (MA); Inertial Measurement Unit - Honeywell (MN); GPS Receiver - Rockwell-Collins (IA); Mission Computer - Lockheed Martin (NJ)



SPECIFICATIONS

Weight	Mk-82/BLU-111: 552/558 lb.; Mk-83/BLU-110: 1014/1029 lb.; Mk-84: 2039/2059 lb.; BLU-109: 2,118/2,138 lb.
Range	<15 nautical miles (NM)
Dimensions	Mk-82/BLU-111 Length: 8 ft.; Mk-83/BLU-110 Length: 10 ft.; Mk-84 Length: 12.7 ft.; BLU-109 Length: 12.4 ft.
Warhead	Blast/Fragmentation: MK-82/BLU-111, MK-83/BLU-110, MK-84; Penetrator: BLU-109
Compatibility	Operational on: B-1B, B-2 A, B-52H, F-14B/D, F-16C/D, F/A-18 C/D/E/F
Guidance	Inertial Navigation System (INS)/Global Positioning System (GPS)

ACQUISITION STATUS

Program Status	Full rate production of JDAM kits for 500 lb. Mk-82/BLU-111, 1,000 lb. Mk-83/BLU-110, and 2,000 lb. Mk-84/BLU-109 bomb bodies
Current Inventory	Over 108,000 tail kits
Future Upgrades	JDAM GPS Selective Availability Anti-Spoofing Module (SAASM) will be included beginning with FY06 deliveries. The anti-jam GPS antenna will be available for a portion of future JDAMs.

GBU-39/B SMALL DIAMETER BOMB (SDB)

MISSION

Provide fighter and bomber aircraft with a tactically significant stand-off attack capability from outside of point defenses against fixed targets, while increasing loadout and minimizing collateral damage.



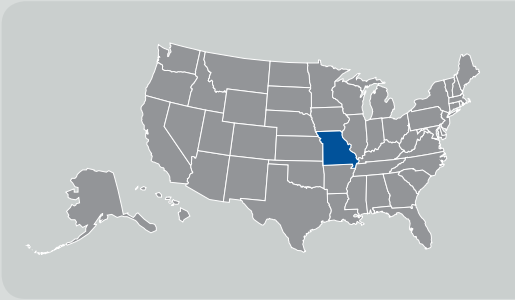
DESCRIPTION

The GBU-39/B Small Diameter Bomb (SDB) weapon system consists of the weapon (GBU-39/B), a four-place miniature munitions carriage system (BRU-61/A), mission planning system, accuracy support infrastructure, and logistics. The SDB is a 250 lb.-class weapon designed as a small autonomous, conventional, air-to-surface, near-precision weapon that is interoperable with established/projected Command, Control, Computers, Communications, Intelligence, Surveillance, and Reconnaissance (C4ISR) architectures and is compatible with current and future Air Force platforms.



CONTRACTORS

Prime: Boeing (MO)



SPECIFICATIONS

Weight	285 lb.
Range	≥ 40 nautical miles (NM) down-range from 0.8 mach at 40K Mean Sea Level (MSL); ≥ 35 NM cross-range from 0.8 mach at 40K Mean Sea Level (MSL)
Dimensions	Length: 71 in.; Width: 7.5 in.; Height: 7.8 in.
Warhead	Penetration/Blast/Fragmentation Warhead
Compatibility	Aircraft: Threshold - F-15E; Objective - F-22, F-16, F-35, F-117, B-52, B-1, B-2, A-10, and MQ-9
Guidance	Inertial Navigation System/Global Positioning System (INS/GPS) Guidance

ACQUISITION STATUS

Program Status	System Development and Demonstration (SDD); projected inventory - 24,000
Current Inventory	Required Assets Available (RAA); 4QFY06: 158 GBU-39/Bs, 27 BRU-61/As
Future Upgrades	Increment II to provide initial capability against moving targets in adverse weather

MISSION

Provide global broadcast of high-volume, high-speed information to deployed forces.



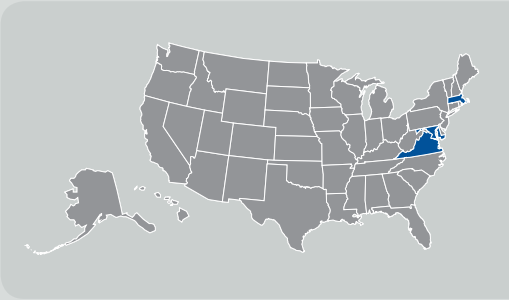
DESCRIPTION

The Global Broadcast Service (GBS) is a communications broadcast service that simultaneously broadcasts imagery, video, and data information to multiple dispersed users using small receive terminals. The GBS uses payloads on three DoD satellites plus commercial leases over the continental United States (mandatory) and Europe (augmentation). Three fixed primary injection points and two mobile injection points uplink broadcasts to satellites.



CONTRACTORS

Prime: Raytheon Intelligence & Information Systems (VA)
Subcontractors: Raytheon Technology Services (VA); MiliTech Corporation (MA); Atlantic Microwave (MA), GTSI (VA); Viasat (MD)



SPECIFICATIONS

Size	Number existing: three military payloads, augmented by commercial leases
	Future: five payload constellation on Wide Gapfiller System (WGS) satellites
Coverage	Global Coverage: 65° N–65° S
Capacity/Satellite	Maximum data rate: 24 Mbps

ACQUISITION STATUS

Program Status	1QFY98 Milestone II
	3QFY06 Beyond Low-rate initial production (LRIP)
	GBS is transferring to WGS satellites once available for use; transition begins in FY07

GLOBAL POSITIONING SYSTEM (GPS)

MISSION

Provide highly accurate positioning, navigation and timing data (globally, 24 hours a day, and in any type of weather) to an unlimited number of civil users and authorized military users.



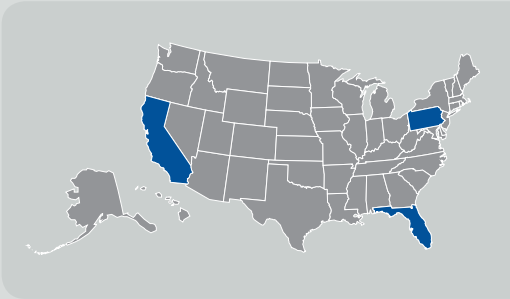
DESCRIPTION

The Global Positioning System (GPS) is comprised of three segments: space segment, control segment, and user segment. The space segment consists of 24 or more satellites in six orbital planes, traveling in semi-synchronous (12-hour) orbits around the earth. The control segment, sometimes referred to as the ground segment, consists of a Master Control Station (MCS), a Back-Up MCS (BMCS), six dedicated monitor stations, and five ground antennas (four dedicated and one shared). The user segment includes the myriad of civil and military GPS receivers used for air, land, sea, and space applications. The GPS is commanded and controlled by Air Force Space Command, 2nd Space Operations Squadron at Schriever AFB, CO.



CONTRACTORS

Prime: Block II/IIA - Boeing (CA);
Block IIR/IIRM - Lockheed Martin
(PA); Block IIF - Boeing (CA);
Block III - TBD **Subcontractors:**
Lockheed Martin (PA); Harris (FL)



SPECIFICATIONS

Size	Block II/IIA - 28 launched/17 on orbit; Block IIR - 13 launched/12 on orbit; IIRM - One launched, one on orbit; IIF - TBD; GPS III - TBD
Weight	II - 3,670 lb.; IIA - 4,150 lb.; IIR - 4,485 lb.; IIR-M - 4,525 lb.; IIF - 3,566 lb.; GPS III - TBD
Coverage	Continuous global coverage

ACQUISITION STATUS

Program Status	Operational - IIRM-1 launched September 25, 2005; first IIF launch, FY07; first GPS III launch, FY13
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MISSION

Provide Combat Search and Rescue (CSAR) and Personnel Recovery (PR); airborne command and control for search and rescue operations, extended visual/electronic searches, delivery of survival equipment over land or water, and unimproved airfield operations for survivor medical evacuation.



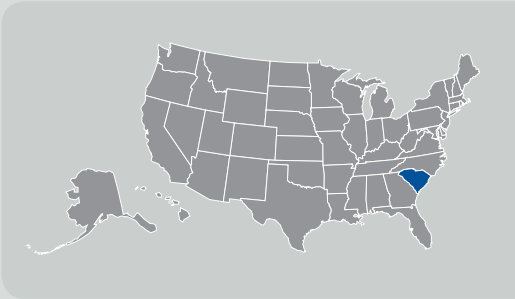
DESCRIPTION

The HC-130P/N King aircraft provides a range of Combat Search and Rescue (CSAR) and Personnel Recovery (PR) capabilities by increasing the range of helicopters through in-flight refueling, insertion of para-rescue specialists (trained in emergency trauma medicine, harsh environment survival, and assisted evasion) via tactical delivery, and airdrop of supplies and equipment to isolated personnel in permissive or hostile environments. The HC-130 can fly in the day against a reduced threat; however, crews normally fly night, low-level, air refueling and airdrop operations using night vision goggles. The HC-130 can fly low-level NVG tactical flight profiles to avoid detection. To enhance the probability of mission success and survivability near populated areas, crews employ tactics that include incorporating no external lighting or communications and avoiding radar and weapons detection.



CONTRACTORS

Prime: Lockheed Martin (SC)



SPECIFICATIONS

Weight	155,000 lb.
Range	3,500 nautical miles (NM)
Dimensions	Wingspan: 132 ft.; Length: 99 ft.; Height: 38 ft.
Service Ceiling	30,000 ft.
Self-Protection	Radar and missile warning receivers, chaff and flare dispensers, cockpit armor
Speed	289 mph (464 km per hour) at sea level
Other Specifications	Communications: UHF/VHF/SATCOM/Secure/Anit-jam Navigation: Integrated INS/GPS/Dopler, digital low-power color radar

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Moody AFB, GA; Kirtland AFB, NM; Davis-Monthan AFB, AZ; Patrick AFB, FL (AFRC); Moffett FAF, CA (ANG); F.S. Gabreski Airport, NY (ANG); Kulis ANGB, AK (ANG)
Current Inventory	36
Future Upgrades	Integrated SATCOM, NVG compatible lighting (ARC), Forward Looking Infrared (FLIR) (ANG), Enhanced Traffic Alert and Collision Avoidance System (E-TCAS) (partial), personnel locator system (partial), cockpit mods under C-130 Avionics Modernization Program (AMP), in-flight refueling (receiver) capability, tactical data receivers, HC-130 Simulator

MISSION

Conduct day/night/marginal weather alert response missions to recover downed aircrew or other isolated personnel in hostile or permissive environments; perform disaster relief, noncombatant evacuation operations, counter-drug, civil search and rescue, and Space Shuttle support.



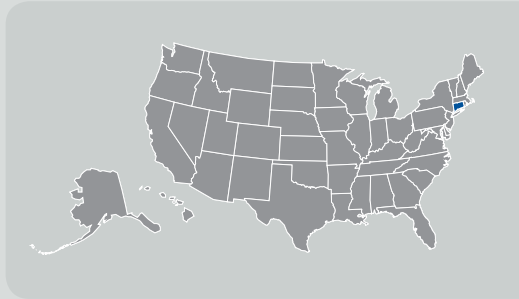
DESCRIPTION

The HH-60G Pave Hawk provides Combat Search and Rescue (CSAR) and Personnel Recovery (PR). It is the most rapidly deployable, long range, combat rescue helicopter in the Air Force inventory. The Pave Hawk is a highly modified version of the Army Black Hawk helicopter. It features an upgraded communications and navigation suite that includes integrated inertial navigation/global positioning/Doppler navigation systems, satellite communications, secure voice, and Have Quick communications. All HH-60Gs have an automatic flight control system, night vision goggles lighting, and forward looking infrared system that greatly enhances night low-level operations. The Pave Hawk has color weather radar and an engine/rotor blade anti-ice system that gives the HH-60G adverse weather capability. Pave Hawk mission equipment includes a retractable in-flight refueling probe, internal auxiliary fuel tanks, and two crew-served 7.62mm/.50cal machine guns. Pave Hawk combat enhancements include a radar warning receiver, infrared jammer, and a flare/chaff countermeasure dispensing system. HH-60G rescue equipment includes a hoist capable of lifting a 600-lb. load (270 kilograms) from a hover height of 200 feet (60.7 meters), and a personnel locating system that is compatible with the PRC-112 survival radio and provides range and bearing information to a survivor's location. A limited number of Pave Hawks are equipped with an over-the-horizon tactical data receiver that is capable of receiving near real-time mission update information.



CONTRACTORS

Prime: Sikorsky (CT)



SPECIFICATIONS

Weight	22,000 lb.
Range	500 nautical miles (NM)
Armament	M-240 7.62 machine gun, GAU-2C-7.62mm mini-gun, GAU-18 .50 caliber machine gun
Dimensions	Main Rotor: 53 ft.; Length: 64 ft.; Height: 16 ft.
Service Ceiling	14,200 ft.
Self-Protection	Integrated Chaff/Flare/RWR, Infra-red (IR) Jammer, Kevlar armor, Self-sealing fuel tanks
Speed	125 kn/hour
Other Specifications	Communications: UHF Line-of-Sight (LOS), VHF LOS, Secure UHF Satellite Communications (SATCOM)/DAMA, Personal Locator System (PLS), HQ-II; Navigations: Integrated INS/GPS/Doppler Forward Looking Infrared (FLIR), over-the-horizon (OTH) Tactical Receiver, Digital Moving Map/Threat Display, WX Radar, Hoist

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Moody AFB, GA; Nellis AFB, NV; Kirtland AFB, NM; Kadena Air Base, Japan; Naval Air Station (NAS) Keflavik, Iceland; Patrick AFB, FL (AFRC); Davis-Monthan AFB, AZ (AFRC, AD); Moffett FAF, CA (ANG); F.S. Gabreski Apt, NY (ANG); Kulis ANGB, AK (ANG), Hill AFB, UT (AFMC)
Current Inventory	101
Future Upgrades	Upgraded Comm/Nav/Electronic Warfare Suite, External Gun mount, Flare/Chaff CMDS – Self Protection System; 701C Engine – Improved Durability Gearbox Upgrade, Structural Integrity Program, Dual Engine Contingency Power, Light Airborne Recovery System ARS-6 Ver-12, Forward Looking Infrared System, Improved Night Vision Imaging System compatible External/Internal lighting. The next generation combat search and rescue replacement aircraft, CSAR-X, solves critical deficiencies in both numbers and capability of HH-60G.

HYPERSONIC TECHNOLOGY VEHICLE (HTV)

MISSION

Develop advanced space vehicles to deliver and deploy a variety of conventional payloads worldwide.



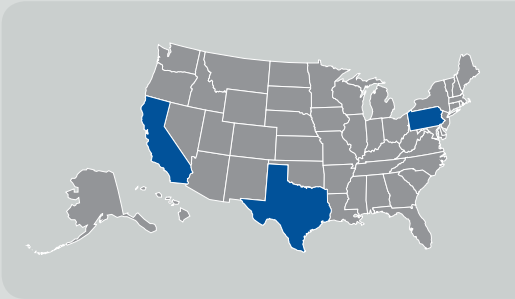
DESCRIPTION

Hypersonic Technology Vehicle (HTV) technology demonstrations will contribute to global reach capabilities by demonstrating an unpowered, maneuverable, hypersonic glide vehicle capable of carrying a 1,000-lb. payload. The HTV effort provides dual growth paths to the Air Force's Prompt Global Strike (PGS) system and Defense Advanced Research Projects Agency's (DARPA) hypersonic cruise vehicle. It represents an affordable, low-risk building block approach to validating key hypersonic technologies. HTV will demonstrate a common set of hypersonic technologies by flying three vehicles of progressively greater capabilities. These include step increases in thermal protection, precision, cross range, and communications/command and control capabilities.



CONTRACTORS

Prime: Lockheed Martin (CA)
Subcontractor(s): Lockheed Martin (PA); Carbon Advanced Technologies, Inc. (TX)



SPECIFICATIONS

Size	Length: 12 ft.; Diameter: 4 ft.
Weight	2,200 lb.
Range	4,000–9,000 nautical miles (NM), depending on configuration
Coverage	Intercontinental to Global
Capacity/Satelite	1,000 lb.
Compatability	Must be compatible with GPS and the Global Information Grid, as well as standardized Air Force Command and Control and Data Dissemination Systems.

ACQUISITION STATUS

Program Status	Demonstration Program; First demonstration launch is currently scheduled for 4QFY07
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JOINT AIR-TO-SURFACE STANDOFF MISSILE (JASSM)

MISSION

Provides stand-off capability to attack critical hardened and non-hardened, fixed, and re-locatable targets defended by next-generation defense systems.



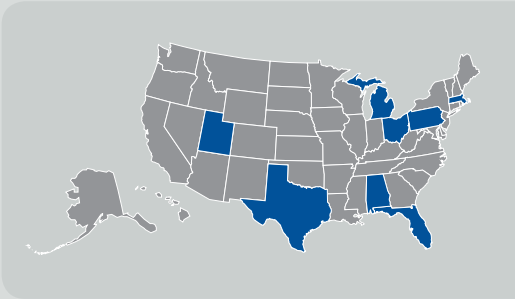
DESCRIPTION

The Joint Air-to-Surface Standoff Missile (JASSM) is a conventional, air-to-surface, precise, autonomous, low-observable, stand-off cruise missile capable of penetrating enemy defenses and striking high-value, fixed, or relocatable targets.



CONTRACTORS

Prime: Lockheed Martin (FL, AL); Teledyne Continental Engine (OH, AL); Williams International (MI, UT); Fiber Innovations (MA); Klune (UT); Wyman-Gordon Forgings (TX); L-3 Communications Telemetry (PA)



SPECIFICATIONS

Weight	2,250 lb.
Range	JASSM: Greater than 200 nautical miles (NM); JASSM-Extended Range (ER): Greater than 500 NM
Warhead	1,000 lb. Blast-Fragmentation and Penetration Warhead
Compatability	Aircraft Compatibility: Threshold - B-52 and F-16; Objective - B-1, B-2, F-15, F-117, and F-35; JASSM-ER Threshold: B-1
Guidance	INS/GPS and an Imagine Infrared (IIR) Terminal Seeker

ACQUISITION STATUS

Program Status	Milestone (MS) I began Program Definition and Risk Reduction (PDRR) June 1996; MS II began engineering and manufacturing development (EMD) 1QFY99; Low rate initial production (LRIP) 1QFY02; MS III 4QFY04; Full rate production 1QFY05; Required Assets Available (RAA) declared on B-52, B-1, B-2, and F-16; Initial Operational Capability (IOC) on B-52 (Barksdale) and B-1 (Dyess) August 15, 2005.
Current Inventory	307
Future Upgrades	JASSM Extended Range (JASSM-ER) - FY08 deliveries; JASSM 2-Way Weapon Data Link - FY10 deliveries

JOINT HELMET MOUNTED CUEING SYSTEM (JHMCS)

MISSION

Provide aircrew with the capability to cue and verify cueing of high off-boresight sensors and weapons; enable U.S. to regain the combat advantage of first look/first shoot in the air-to-air visual range arena.



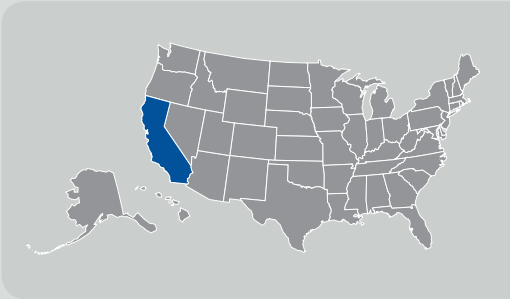
DESCRIPTION

The Joint Helmet Mounted Cueing System (JHMCS) is a “look and shoot” system that incorporates a visor-projected Heads-Up Display (HUD) to cue weapons and sensors to the target. This new cueing system improves effectiveness in both Air-to-Air and air-to-ground missions. In close combat, a pilot must currently align the aircraft to shoot at a target. JHMCS allows the pilot to simply look at a target to shoot. This system projects visual targeting and aircraft performance information on the back of the helmet’s visor, enabling the pilot to monitor this information without interrupting his field of view through the cockpit canopy. The system uses a magnetic transmitter unit fixed to the pilot’s seat and a magnetic field probe mounted on the helmet to define helmet pointing positioning. A Helmet Vehicle Interface (HVI) interacts with the aircraft system bus to provide signal generation for the helmet display. This provides significant improvement for close combat targeting and engagement. When used in conjunction with an AIM-9X missile, JHMCS allows a pilot to effectively designate and kill targets in a cone more than 80 degrees to either side of the nose of the aircraft or high-off-boresight.



CONTRACTORS

Prime: Boeing/VSI (CA)
Subcontractor(s): Kaiser Electronics (CA), Elbit (Israel)



SPECIFICATIONS

Weight	Helmet weight less than or equal to 4.3 lb.
Range	JASSM: Greater than 200 nautical miles (NM); JASSM-Extended Range (ER): Greater than 500 NM
Compatability	System is employed in F-15C/D, F-16, and the Navy F/A-18C/D/E/F
Helmet Center of Gravity	Less than or equal to 2.5 in. off center

ACQUISITION STATUS

Program Status	Joint Air Force/Navy Program in production; Initial fielding in-progress; Milestone III approved 2QFY04; Full Rate Production-1 (FRP) contract awarded 3QFY04; procurement objective is 1,952 units
Unit Assignment	Elmendorf AFB (AK), Lakenheath (UK), and Mountain Home AFB (ID)
Future Upgrades	Preplanned Product Improvement (P3I) options are currently being evaluated

MISSION

Provide worldwide air refueling for Air Force, Navy, NATO, and allied aircraft, as well as strategic airlift capability; enable global mobility, and local and global strike missions.



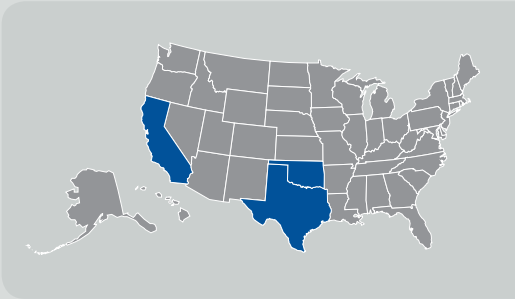
DESCRIPTION

The KC-10 Extender is an aerial refueling asset built on the commercial DC-10 airframe. The aircraft creates an air bridge to enable global mobility and global strike missions (such as B-2 missions) and local strike missions by enabling longer sorties. It has 88-percent systems commonality with the DC-10, with additional systems and equipment necessary for its Air Force mission. These additions include military avionics; aerial refueling boom and aerial refueling hose and drogue systems; a seated aerial refueling operator station; and aerial refueling receptacle and satellite communications. The maximum fuel transfer rate to receiver aircraft is 1,100 gallons per minute for the boom system and 470 gallons per minute for the drogue system. There are 59 KC-10 aircraft in the USAF tanker fleet (20 aircraft with multi-point fueling capability). There are two active duty units at McGuire AFB, NJ, and Travis AFB, CA.



CONTRACTORS

Prime: Airframe - Boeing (TX);
Engines - General Electric (CA)
Subcontractor(s): ARINC (OK)



SPECIFICATIONS

Weight	Maximum gross takeoff weight: 590,000 lb.
Dimensions	Wingspan: 165.3 ft.; Height: 58 ft.; Length: 181.5 ft.
Compatability	Capable of air refueling Air Force, Navy, Marine, NATO, and Allied Aircraft
Service Ceiling	42,000 ft.
Speed	619 mph (Mach 0.825)
Payload	Max total payload 356,000 lb.
Max Cargo	170,000 lb.
Max Fuel Load	186,000–356,000 lb. (depending on cargo load)
Passenger Capacity	75

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	McGuire AFB, NJ, and Travis AFB, CA
Current Inventory	59
Future Upgrades	Aircraft Modernization Program (AMP), Thrust Reverser Airworthiness Directive

MISSION

Provide worldwide air refueling and strategic airlift for Air Force, Navy, NATO, and Allied aircraft; enable global mobility and global strike.



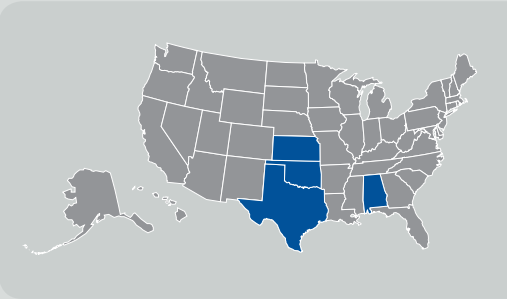
DESCRIPTION

The KC-135 Stratotanker creates an airbridge to enable global mobility and global strike missions (such as B-2 missions) and local global strike missions by enabling longer sorties. It is built on a similar airframe to the 707 passenger aircraft. The KC-135 completed an engine upgrade in June 2005 to put F-108 engines (CFM-56 commercial engines) on the 417 KC-135R model aircraft. It is equipped with military avionics, an aerial refueling boom, a prone aerial refueling operator station, and satellite communications. There are currently 531 KC-135 E/D/R/T models in the inventory at 35 bases, 29 states, and two overseas bases: Kadena Air Base (AB), Japan, and RAF Mildenhall, UK. Twenty aircraft are capable of multi-point refueling using hose and drogue refueling.



CONTRACTORS

Prime: Engineering - Boeing (KS);
Depot Maintenance - Boeing (TX);
GATM - Rockwell Collins (TX)
Subcontractor(s): Depot Maintenance - PEMCO (AL); CFM-56/F108
R model engines - General Electric (OK); TF-33 E-model engines
 - Pratt & Whitney (OK)



SPECIFICATIONS

Range	With fuel offload of 150,000 lb. throughout flight: 1,500 nautical miles (NM)
Dimensions	Wingspan: 130.9 ft.; Height: 41.7 ft.; Length: 128.9 ft.
Compatability	Capable of air refueling Air Force, Navy, Marine, NATO, and allied aircraft
Service Ceiling	50,000 ft.
Speed	530 mph at 30,000 ft.
Payload	Max total payload: 200,000 lb.
Max Cargo Load	83,000 lb.
Max Fuel Load	117,000–200,000 lb.
Passenger Capacity	54

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Air Force Reserve (AFRES): Grissom, IN; Selfridge, MI; Andrews AFB, MD; Seymour Johnson AFB, NC; Tinker AFB, OK; March AFB, CA; Beale AFB, CA; Portland, OR Air National Guard (ANG): Salt Lake City, UT; McConnell AFB, KS; Lincoln, NE; Sioux City, IA; Scott AFB, IL; Gen Mitchell, WI; Rickenbacker, OH; Niagara, NY; Bangor, ME; Pease, NH; Pittsburgh, PA; McGuire, NJ; McGhee Tyson, TN; Birmingham, AL; Key Field, MS; Forbes Field, KS; Hickam AFB, HI; Phoenix, AZ; Eielson AFB, AK; March AFB, CA; Fairchild AFB, WA Active: Fairchild AFB WA, McConnell AFB KS, Grand Forks AFB ND, Robins AFB GA, MacDill AFB FL, Altus AFB OK, Edwards AFB, CA
Current Inventory	531
Future Upgrades	Control Column Actuated Brake, Global Air Traffic Management (GATM), Latrine Upgrade

LAUNCH & TEST RANGE SYSTEM (LTRS)

MISSION

Perform command, control, and communications functions in support of national (DoD, civil, and commercial) space launches, ballistic missile and missile defense tests, and aeronautical flight tests, and provide sensors to support the space surveillance mission.



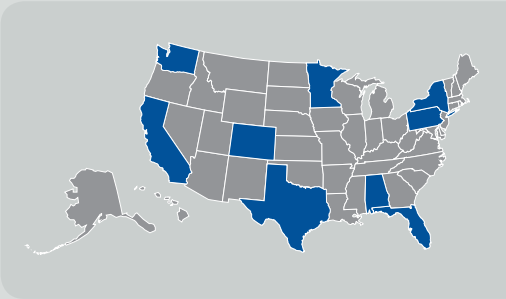
DESCRIPTION

The Launch & Test Range System (LTRS) is a key enabler for all Air Force, DoD, and National Aeronautics and Space Administration (NASA) capabilities that employ or depend on space-based or ballistic missile systems. It provides responsive, reliable, and cost-effective launch scheduling, communications, metric tracking, telemetry, flight analysis, and emergency termination to an average of 35 DoD, civil, and commercial space launches and ballistic missile tests per year. It also supports guided weapons and aeronautical tests and space surveillance missions. The LTRS consists of the Eastern Range at Patrick AFB/Cape Canaveral AFS, the Western Range at Vandenberg AFB, and downrange sites and assets associated with both. The ranges include 16 command transmitters, 18 tracking radars, 14 telemetry receiver antennae, and eight optic sites located in the Eastern and Western range complexes, as well as a multitude of associated suites of equipment.



CONTRACTORS

Prime: Lockheed Martin (CA); ITT Industries (FL); InDyne, Inc (CA); Computer Sciences/Raytheon (FL)
Subcontractors: L-3 Communications (CA); KSS (Kelly's Logistics Support Services) Scitor (CA); SRI International (CA); Hughes space (CO); Boeing (FL); Contraves (PA); TRAK Microwave (FL); RT Logic (CO); ADC (MN); ENSCO (FL); Net Acquire (WA); Freescale Semiconductor Inc (CO); Dolphin (NY); ASR (CA); Excel (CA); Superior (NY); CDI Corp (CA); Volt (CA); Lockheed Martin Tactical Aircraft Systems (CA); Lockheed Martin Technical Operations (CA); Alcatel (TX); DCS Corp (CA); Robinson & Robinson (FL); Smith Electric (CA); ITT Industries (FL)



SPECIFICATIONS

Coverage	Provides trajectory coverage for current and forecasted launches:
	ER: Launch trajectories from 34° to 112° WR: Launch trajectories from 153.6° to 281°. Supports launches with 24 hours between close of first launch window and opening of second launch window.
Interoperability	Interoperable with NASA and commercial launch systems

ACQUISITION STATUS

Program Status	Undergoing modernization while operational
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MISSION

Provide a highly survivable, reliable, intercontinental nuclear missile that can accurately strike a variety of targets around the world.



DESCRIPTION

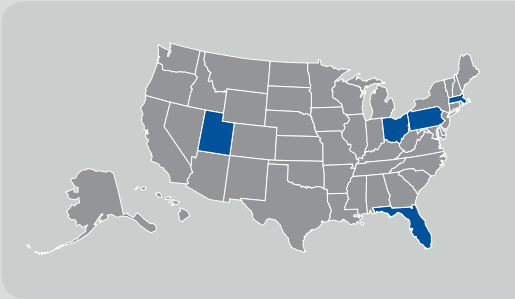
The Minuteman III is an inertially guided ballistic missile of intercontinental range. It is the highly survivable, quick-reacting, land-based component of our nation's nuclear triad. MMIII is capable of delivering up to three independently targetable reentry vehicles.



CONTRACTORS

Prime: Northrop Grumman Mission Systems (UT)

Subcontractor(s): Lockheed Martin (PA), Boeing (OH), Alliant Techsystems (UT), Raytheon (MA), Honeywell (FL), Aerojet (UT)



SPECIFICATIONS

Weight	79,432 lb.
Range	6,000 miles plus
Armament	One to three MK12/12A reentry vehicles (RVs)
Dimensions	Length: 59.9 ft.; Diameter: 5.5 ft.
Warhead	W62/W78
Coverage	Global
Speed	Approximately 15,000 mph at burnout

ACQUISITION STATUS

Program Status	Fielded, undergoing life extension programs
Unit Assignment	500 MMIII missiles deployed at Malmstrom AFB (MT); Minot AFB (ND), and FE Warren AFB (WY)

MC-130E COMBAT TALON

MISSION

Provide global, day/night, and adverse weather airdrop, airland, infiltration, and exfiltration of personnel and equipment.



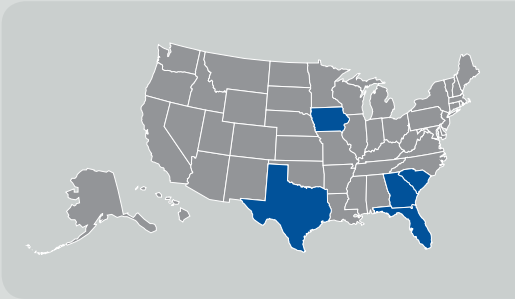
DESCRIPTION

The MC-130E Combat Talon supports U.S. and allied special operations forces with infiltration and exfiltration missions. It also plays a deep-penetrating, helicopter refueling role during special operations missions.



CONTRACTORS

Prime: Airframe-Lockheed Martin (SC); **Integrated Weapon System Support** - Boeing (FL); Radar-Raytheon (TX); **General Avionics**-L-3 Communications (GA, TX); **Communications/Navigation**-Rockwell Collins (IA)



SPECIFICATIONS

Weight	155,000 lb. (gross weight)
Range	2,700 nautical miles (NM); unlimited with in-flight refueling
Dimensions	Wingspan: 132 ft.; Length: 99 ft.; Height: 38 ft.

ACQUISITION STATUS

Program Status	Modifications only
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MISSION

Provide global, day/night, and adverse weather airdrop, airland, infiltration, and exfiltration of personnel and equipment in support of U.S. and allied special operations forces.



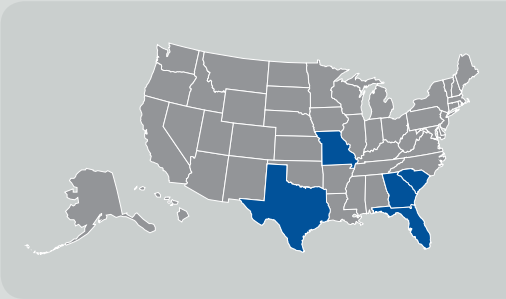
DESCRIPTION

The MC-130H Combat Talon II conducts covert penetration of politically sensitive/hostile airspace to insert, resupply, and extract special operations forces and equipment and to aerial refuel helicopters for extended operations. These missions are conducted in adverse weather and at night at low level and long range.



CONTRACTORS

Prime: Airframe - Lockheed Martin (SC); Integrated Weapon System Support - Boeing (FL); Radar - SEI (MO); General Avionics - L-3 Communication (GA, TX); Communication/Navigation - Rockwell Collins (IA)



SPECIFICATIONS

Weight	155,000 lb. (gross weight)
Range	2,700 nautical miles (NM); unlimited with in-flight refueling
Dimensions	Wingspan: 132 ft.; Length: 99 ft.; Height: 38 ft.

ACQUISITION STATUS

Program Status	Three Combat Loss Replacement aircraft to be procured; eight new aircraft to be procured
Future Upgrades	Multiple modifications

MISSION

Fly clandestine or low-visibility, low-level missions into politically sensitive or hostile territory to provide air refueling for special operations helicopters.



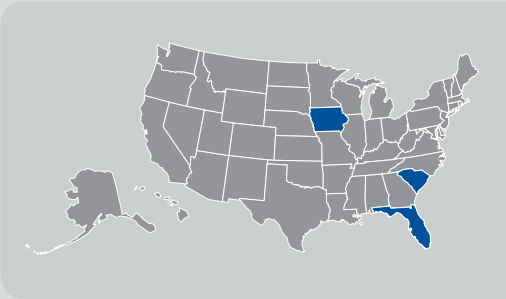
DESCRIPTION

The MC-130P primarily flies its single- or multi-ship missions at night to reduce detection and intercept by airborne threats. Secondary capabilities include airdrop of small special operations teams, small bundles, and Zodiac and combat rubber raiding craft as well as night-vision goggle take-offs and landings.



CONTRACTORS

Prime: Airframe - Lockheed Martin (SC); Integrated Weapon System Support - Boeing (FL); **Communications/Navigation** - Rockwell Collins (IA)



SPECIFICATIONS

Weight	155,000 lb. (gross weight)
Range	2,700 nautical miles (NM) without internal Benson Tanks; 4,000+ NM with internal Benson Tanks; Unlimited with In-Flight Refueling (Benson Tanks are fuel tanks placed in the cargo area to hold additional fuel normally used for Helicopter Air Refueling—fuel can be used by the MC-130P)
Dimensions	Wingspan: 132 ft.; Length: 99 ft.; Height: 38 ft.

ACQUISITION STATUS

Program Status	One Combat Loss Replacement aircraft to be procured
Future Upgrades	Multiple modifications

MEDIUM LAUNCH VEHICLE (MLV)

MISSION

Provide continuing, highly reliable launch of medium-weight national security satellites into low-earth, polar, geosynchronous transfer, and stational orbits.



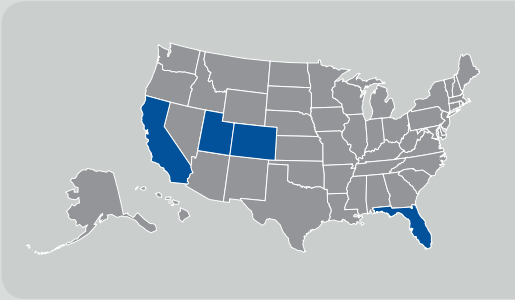
DESCRIPTION

The Delta II Medium Launch Vehicle (MLV) launches GPS Block IIR Replenishment satellites. The MLV is capable of launching a 5,089 kg payload, or satellite, into a 185 km Low Earth Orbit (LEO), or a 2,810 kg payload into Geosynchronous Transfer Orbit (GTO). GTO orbits are required to loft satellites from lower LEO orbits to higher Geosynchronous Earth Orbits (GEO), which allow satellites to rotate with the earth and remain positioned over one region of the earth's surface. Reliability of the Delta II Medium Launch Vehicle (MLV) is over 98 percent, with 118 (out of 120) successful launches since 1979.



CONTRACTORS

Prime: Boeing Aerospace (CO)
Subcontractor(s): Alliant (UT);
Rocketdyne (CA); Aerojet (CA)
Pratt & Whitney (FL);
Honeywell (FL); Thiokol (UT)



SPECIFICATIONS

Size	Length: 125 ft. (38.1 m); Diameter: 10 ft. (3.05 m)
Weight	Mass at liftoff: 512,267 lb. (231,900 kg)
Range	LEO Payload: 6,580 kg to 185 km orbit at 28.5 degrees; Payload: 2,810 kg to a Geosynchronous transfer trajectory; Apogee: 40,000 km
Capacity/Satellite	Pounds to orbit range: 2,050–12,450. Will vary depending on orbit and vehicle configuration.
Interoperability	Launches from both Cape Canaveral Air Force Station (CCAFS) and Vandenberg AFB, cooperating with NASA and commercial launch services.
Compatibility	Satisfies all payload integration requirements.

ACQUISITION STATUS

Program Status	MLVIII (Delta II) Active
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MISSION

Provide low-level, long-range, undetected penetration into denied areas—day or night, in adverse weather—for infiltration, exfiltration, and resupply of special operations forces.



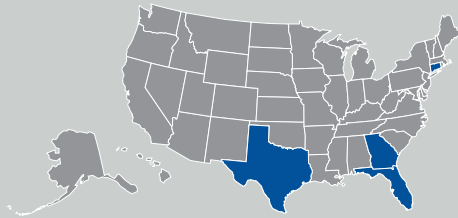
DESCRIPTION

MH-53J/M Pave Low III/IV missions are almost always conducted under cover of darkness and frequently under adverse weather conditions requiring extended flight operations as low as 50 ft. using night vision goggles or Instrument Meteorological Conditions as low as 100 ft. above ground level. Missions involve deep penetrations of hostile areas at extreme ranges without escort. The MH-53M employs a sophisticated avionics system to enhance crew situational awareness and to avoid threats.



CONTRACTORS

Prime: Airframe - Sikorsky (CT);
Engine/Gear Box - Lockheed Martin
 (GA); **Radar/Forward Looking
 Infrared (FLIR)** - Raytheon (TX);
General Mods - EJM (FL), MTC (GA)



SPECIFICATIONS

Weight	46,000 lb. (gross weight)
Range	600 nautical miles (NM); unlimited with helicopter air refueling
Armament	Two 7.62 mm Mini-Guns; One .50 Caliber Machine Gun
Dimensions	Length: 88 ft.; Height: 25 ft.; Roto Diameter: 72 ft.

ACQUISITION STATUS

Program Status	Modifications only
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MISSION

Develop, procure, deploy, and sustain multi-band satellite communications (SATCOM) terminals used by Air and Space Expeditionary Forces (AEF), the Single Integrated Operations Plan (SIOP), combatant commanders, and other users to communicate over current and emerging transformational military and commercial satellite systems.



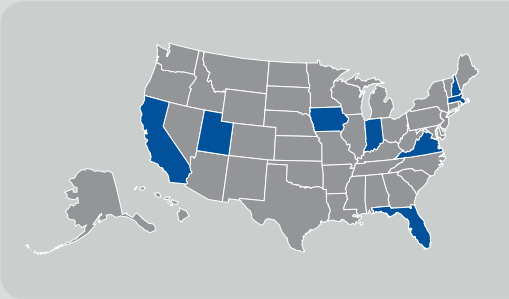
DESCRIPTION

Military Satellite Communications (MILSATCOM) Terminals provide the president, combatant commanders, and warfighters in the field with secure, worldwide communications capability. Terminals provide the user segment of the MILSATCOM space system. MILSATCOM Terminals addressed by this warfighting system are the Ground Multi-band Terminal (GMT), Family of Advanced Beyond Line of Sight Terminals (FAB-T), High Data Rate Radio Frequency (HDR-RF), Airborne Laser Communications Terminal (ALT), Airborne Integrated Terminal (AIT), Secure Mobile Anti-Jam Reliable Tactical Terminal (SMART-T), Multi-Band Multi-Mode Radio (MBMMR), Global Broadcast System (GBS) Receive Terminals, and Defense Satellite Communication System (DSCS) Terminals.



CONTRACTORS

Prime: Boeing (CA); Raytheon (MA, FL, IN, VA); Rockwell (IA); BAE (NH)
Lockheed Martin (CA); Northrop Grumman (CA)
Subcontractor(s): Harris (FL); L-3 Communications (UT); ViaSat (CA)



SPECIFICATIONS

Coverage	Global
Capacity/Satellite	Terminals operate with current systems such as Milstar, UHF Follow-On (UFO) satellites, and the Defense Satellite Communications System (DSCS), as well as commercial systems, and will operate with future systems such as Advanced Extremely High Frequency (AEHF), Wideband Gapfiller Satellites (WGS), Transformational Satellites (TSAT), and the Mobile User Objective System (MUOS).
Interoperability	Interoperable with joint and allied SATCOM terminals per military and commercial standards
Compatibility	Compatible with satellites and user input/output devices per military and commercial standards

ACQUISITION STATUS

Program Status	Terminals are in various stages of development, production, fielding, and sustainment.
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MISSION

Provide secure, jam-resistant, worldwide satellite communications to meet essential wartime requirements for high-priority military users.



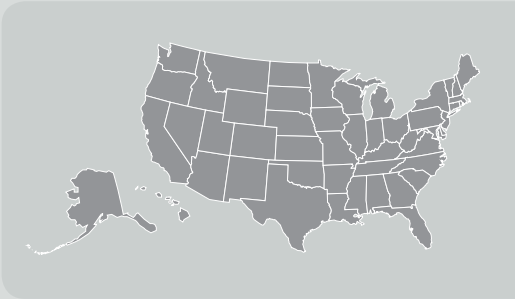
DESCRIPTION

Milstar is a joint-service, multi-satellite constellation that links command authorities with a wide variety of resources, including ships, submarines, aircraft, and ground stations. Each Milstar satellite serves as a smart switchboard in space by directing traffic from terminal to terminal anywhere on the earth. Since the satellite actually processes the communications signal and can link with other Milstar satellites through crosslinks, the requirement for ground-controlled switching is significantly reduced. The satellite establishes, maintains, reconfigures, and disassembles required communications circuits as directed by the users. Milstar terminals provide encrypted voice, data, teletype, or facsimile communications. A key goal of Milstar is to provide interoperable communications among the users of Army, Navy, and Air Force Milstar terminals.

The Milstar system is composed of three segments: space (the satellites), terminal (the users), and mission control. Air Force Space Command's Space and Missile Systems Center at Los Angeles Air Force Base, CA, is responsible for development and acquisition of the Milstar space and mission control segments. The Electronics Systems Center at Hanscom AFB, MA, is responsible for the Air Force portion of the terminal segment development and acquisition. The 4th Space Operations Squadron at Schriever AFB, CO, is the front-line organization providing real-time satellite platform control and communications payload management.

CONTRACTORS

Prime: Lockheed Martin Missiles and Space (Global)



SPECIFICATIONS

Weight	Approx. 10,000 lb. (4,536 kg)
Range	Orbit altitude: 22,250 nautical miles (NM) (geosynchronous orbit)
Coverage	65° N to 65° S
Capacity/Satellite	Five satellite (primary) constellation in geosynchronous orbit
Launch Vehicle	Titan IVB/Centaur upper stage

ACQUISITION STATUS

Program Status	Complete
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MISSION

The MQ-1 Predator is a medium-altitude, long-endurance remotely piloted aircraft. The MQ-1's primary mission is long-dwell reconnaissance and target acquisition in support of the Joint Forces commander. It also provides dedicated support to ground troops by directly down-linking real-time full motion video to units equipped with Remotely Operated Video Enhanced Receiver (ROVER) terminals. The MQ-1 Predator has the capability to directly attack critical, perishable targets with AGM-114 Hellfire missiles.



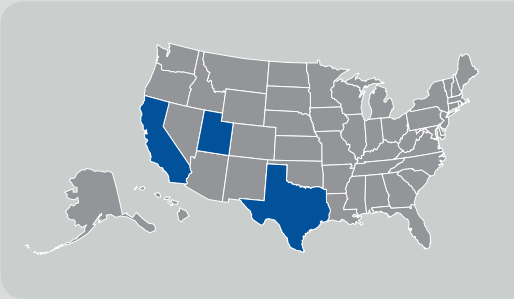
DESCRIPTION

The MQ-1 Predator is an Unmanned Aerial System (UAS) aircraft that delivers persistent Intelligence, Surveillance, and Reconnaissance (ISR) with day/night full-motion video, laser target designation for fellow aircraft, and direct-strike capabilities using Hellfire laser-guided missiles.



CONTRACTORS

Prime: General Atomics ASI (CA);
Subcontractor(s): L-3
Communications (UT); Raytheon (TX)



SPECIFICATIONS

Size	Wingspan: 55 ft.; Length: 28 ft.
Weight	Maximum takeoff weight: 2,250 lb.
Range	400 nautical miles (NM) (with 16 hours on station)
Armament	Two AGM-114 Hellfire laser-guided missiles
Warhead	Blast/Fragmentation or anti-armor
Coverage	Varies by sensor. Full motion video coverage in the day differs from night. Both are line of sight
Capacity/Satellite	Sensor Data: Beyond Line of Sight (BLOS) Ku SATCOM - 3.2 Mbps Line of Sight (LOS) C-Band - 455 Kbps to ROVER customers. Future datalink improvements will provide a 10.71 Mbps Ku-band LOS Tactical Common Datalink (TCDL) to ROVER III and ground stations and a 6.4 Mbps Ku-band BLOS datalink
Interoperability	Sensor data currently provided via proprietary data links. Full Motion Video uses proprietary Motion JPEG format for BLOS and standard H.261 for ROVER. Future datalink improvements will provide FMV via standard MPEG-2 format with NGA-standard Key Length Value (KLV) metadata over standard TCDL datalinks. Data sent to ROVER is used by forces on ground in direct contact with the enemy
Compatability	Sensor data is compatible with Predator ground stations and ROVER receivers

ACQUISITION STATUS

Program Status	Full rate production
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MISSION

Provide battlefield situational awareness and immediate precision direct-strike capability.



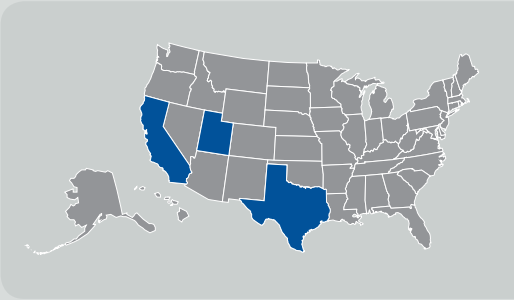
DESCRIPTION

The MQ-9 Predator B will influence the battle space by providing continuous coverage of the area of interest, independent of time of day or weather obscuration, with the ability to detect, identify, attack, and destroy critical emerging targets (both moving and stationary) from endurance altitude within the defined area. The MQ-9 provides persistent full-motion video directly to decision makers and warfighters in direct contact with the enemy. The MQ-9 can conduct direct strikes using Guided Bomb Unit (GBU)-12 laser-guided 500-lb. bombs, GBU-38 Joint Direct Attack Munition (JDAM), and laser target designation for buddy aircraft. MQ-9 also provides persistent Intelligence, Surveillance, and Reconnaissance (ISR) with day/night full-motion video (EO/IR) and a synthetic aperture radar with Ground Moving Target Indicator (GMTI).



CONTRACTORS

Prime: General Atomics ASI (CA)
Subcontractor(s): L-3
Communications (UT), Raytheon (TX)



SPECIFICATIONS

Size	Wingspan: 64 ft.; Length: 36 ft.
Weight	Maximum takeoff weight: 10,000 lb.
Range	1,000 nautical miles (NM) (with 16 hours on station)
Armament	Up to 3,000 lb. of GBU-12 laser-guided 500-lb. bombs and/or GBU-38 JDAMs
Coverage	Varies by sensor—full motion video day versus night; synthetic aperture radar and ground moving target indicator all have different coverages. All are Line of Sight (LOS).
Capacity/Satellite	Sensor Data; Beyond Line of Sight (BLOS) Ku SATCOM - 3.2 Mbps; LOS C-Band - 455 Kbps to ROVER customers. Future datalink improvements will provide a 10.71 Mbps Ku-band LOS Tactical Common Datalink (TCDL) to ROVER III and ground stations and a 6.4 Mbps Ku-band BLOS datalink
Interoperability	Sensor data currently provided via proprietary data links. Full Motion Video uses proprietary Motion JPEG format for BLOS and standard H.261 for ROVER. Future datalink improvements will provide FMV via standard MPEG-2 format with NGA-standard Key Length Value (KLV) metadata over standard TCDL datalinks. Data is sent to ROVER used by forces on ground in direct contact with the enemy
Compatability	Sensor data compatible with Predator ground stations and ROVER receivers

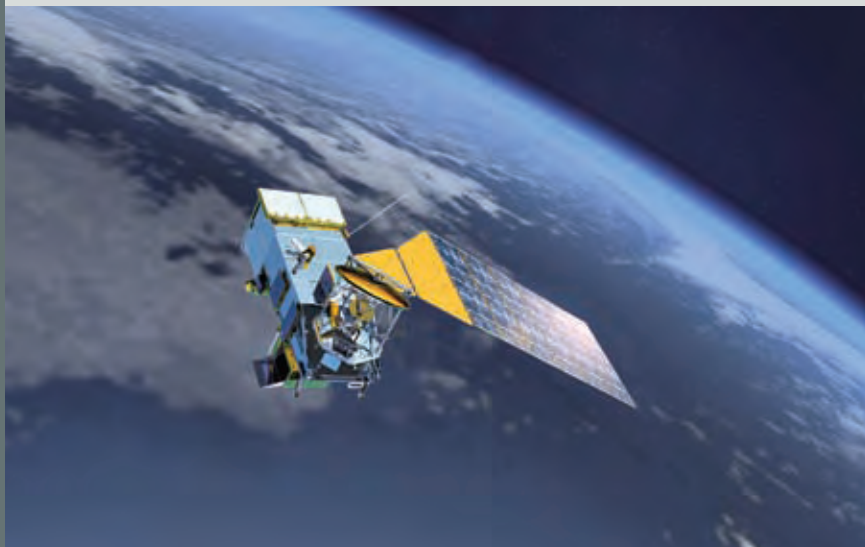
ACQUISITION STATUS

Program Status	System Development and Demonstration (SDD)
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NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM (NPOESS)

MISSION

Provide military commanders and civilian leaders with assured, timely, high-quality global weather and environmental information to effectively employ weapon systems and protect national resources.



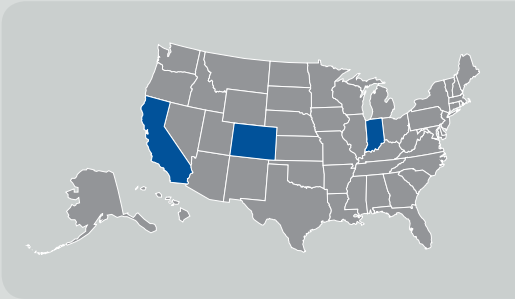
DESCRIPTION

The National Polar-orbiting Operational Environmental Satellite System (NPOESS) is a tri-agency program (DoD, Department of Commerce, and NASA) that will be the nation's primary source of global weather and environmental data for operational military and civil use for at least 10 years. NPOESS will fly a suite of instruments that will provide visible and infrared cloud-cover imagery and other atmospheric, oceanographic, terrestrial, and space environmental information. In all, NPOESS will measure environmental parameters such as soil moisture, cloud levels, sea ice, ozone, and more.



CONTRACTORS

Prime: Northrop Grumman Space Technology (CA);
Subcontractor(s): Raytheon (CO); Boeing Satellite Systems (CA); Ball Aerospace (CO); **Instruments** - ITT Industries (IN)



SPECIFICATIONS

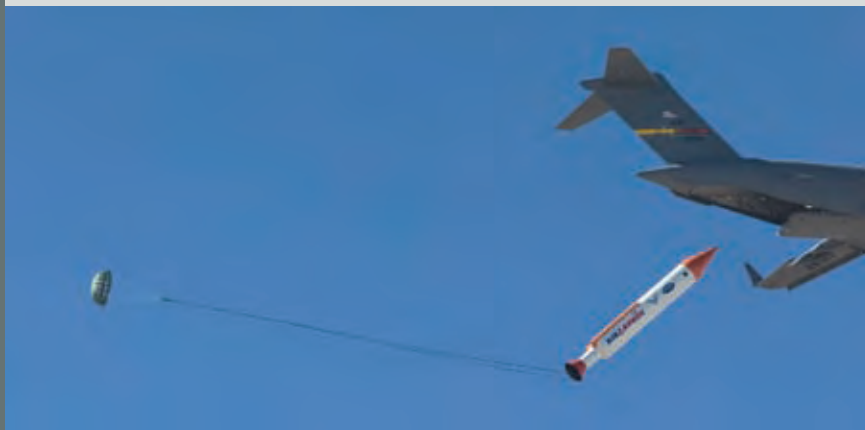
Weight	14,498 lb. (max)
Coverage	Global; Low Earth Polar Sun synchronous orbit - three orbit planes with four-hour revisit capability
Dimensions	Length: 88 ft.; Height: 25 ft.; Rotor Diameter: 72 ft.

ACQUISITION STATUS

Program Status	Engineering and Manufacturing Development (EMD)
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MISSION

Provide and contribute to Space Force Enhancement, Space Support, Counterspace, Mission Support, and Space Force Application.



DESCRIPTION

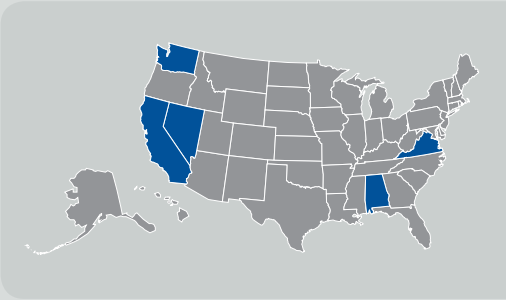
Operationally Responsive Space (ORS) will provide an affordable capability to promptly, accurately, and decisively, position, and operate national and military assets in and through space and near space. ORS will be fully integrated and interoperable with current and future architectures, and provide space services and critical capabilities to warfighters and other users. ORS is a vision for transforming future space and near space operations, integrations and acquisition, all at a lower cost.



CONTRACTORS

Prime: Air Launch (WA); Space-X (CA); The Air Force Research Laboratory (NM); U S Naval Research Laboratory (DC)

Subcontractor(s): Space Vector Corp. (CA); Universal Space Lines LLC (CA); HMX (NV); Orion Propulsion (AL); Delta Velocity Corporation (VA)



SPECIFICATIONS

Range	Capable of inserting assigned payloads into orbit
Capacity/Satellite	Goal of Small Launch Vehicle (SLV): 1,000 lb. to 100 nautical miles (NM), 28.5° orbit; TacSat-1 (AF supporting launch ops and range ops): 300 lb small satellite for low resolution tactical imaging and RF emitter identification via Secure Internet Protocol Router Network (SIPRNet) tasking/exploitation. TacSat-2 (AF funded): 800 lb small satellite for higher resolution tactical imaging and RF emitter identification via SIPRNET tasking/exploitation. TacSat-3 (AF funded): 800 lb small satellite for HyperSpectral imaging and navy ocean buoy data collection/communications. TacSat-4 (AF providing launch): 836 lb (planned) small satellite for data exfiltration/collection, Blue Force Situational Awareness (BFSA) and communications on the move for underserved users.
Interoperability	Launch from both Cape Canaveral Air Force Station (CCAFS) and Vandenberg Air Force Base (VAFB), cooperating with NASA and commercial launch services
Compatibility	Satisfies all payload integration requirements

ACQUISITION STATUS

Program Status	System Development & Demonstration (SDD)
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POLAR MILITARY SATELLITE COMMUNICATIONS (MILSATCOM)

MISSION

Provides secure, survivable communications connectivity required to support peacetime, contingency, and wartime operations in the polar region.



DESCRIPTION

Polar Military Satellite Communications (MILSATCOM) provides critical tactical users 24-hour/day coverage with two properly phased satellites and assured, low probability of detection satellite communications in the North polar region.



CONTRACTORS

Classified



SPECIFICATIONS

Size	Interim Polar: Three payload packages hosted on classified satellites; Enhanced Polar: Two payload packages hosted on classified satellites
Coverage	Northern latitudes above 65° N
Capacity/Satellite	Interim Polar: Milstar Low Data Rate (LDR) data rates; Enhanced Polar: Advanced Extremely High Frequency (AEHF) Extended Data Rate (XDR) Format
Compatibility	Interim: Polar package compatible with LDR terminals Enhanced: Polar package compatible with XDR terminals

ACQUISITION STATUS

Program Status	All milestones are classified.
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MISSION

Collect Measurement and Signature (MASINT) intelligence for the scientific and technical assessment of foreign ballistic missiles and treaty verification.



DESCRIPTION

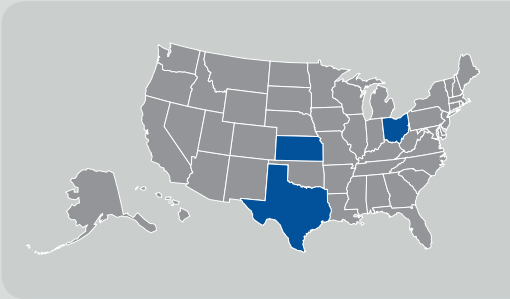
The RC-135S Cobra Ball is a self-contained Measurement and Signature (MASINT) intelligence collection platform that provides scientific and technical assessments of foreign ballistic missiles and treaty verification. Cobra Ball's specialized crew employs sensitive telescopic monitoring devices, advanced optics, and infrared sensors to provide national and theater command authorities with intercontinental ballistic missile treaty verification data and Theater Air Defense warning.



CONTRACTORS

Prime: Major Subsystems - L-3 Communications (TX); Textron (OH, TX)

Subcontractor(s): Propulsion - General Electric (OH); Airframe - Boeing (KS)



SPECIFICATIONS

Weight	322,500 lb. maximum take-off gross weight; 160,000 lb. aircraft basic weight
Range	5,000+ miles unrefueled; inflight refueling capable
Dimensions	Length: 140 ft.; Wingspan: 131 ft.; Height: 42 ft.
Speed	500 mph
Duration	8–10 hours unrefueled, limited only by aircrew duty requirements if aerial refueled

ACQUISITION STATUS

Program Status	Modification and Sustainment
Unit Assignment	55th Wing, Offutt AFB, NE
Current Inventory	Three mission aircraft plus one flight deck trainer aircraft

MISSION

Collect information used in the development of advanced weapon systems and dynamic reprogramming of radar warning gear.



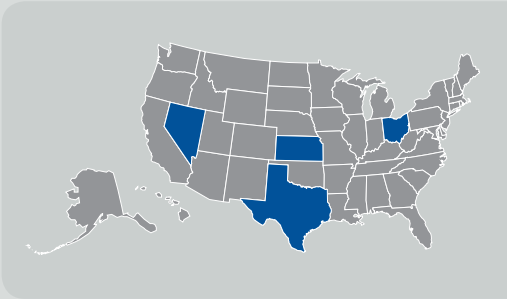
DESCRIPTION

The RC-135U Combat Sent is a scientific and technical Signals Intelligence (SIGINT) collector of information used in the development of advanced weapon systems and the dynamic reprogramming of radar warning gear.



CONTRACTORS

Prime: Major Subsystems - L-3 Communications (TX),
Sierra Nevada Corporation (NV);
Subcontractor(s): Propulsion
- General Electric (OH); Airframe
- Boeing (KS)



SPECIFICATIONS

Weight	322,500 lb. maximum gross take-off weight; 165,000 lb. aircraft basic weight
Range	5,000+ miles unrefueled; inflight refueling capable
Dimensions	Length: 136 ft.; Wingspan: 131 ft.; Height: 42 ft.
Speed	500 mph
Duration	8–10 hours unrefueled, limited only by aircrew duty requirements if aerial refueled

ACQUISITION STATUS

Program Status	Modification and Sustainment
Unit Assignment	55th Wing, Offut AFB, NB
Current Inventory	Two mission aircraft

MISSION

Provide direct tactical Signals Intelligence (SIGINT) support to theater/ component commanders.



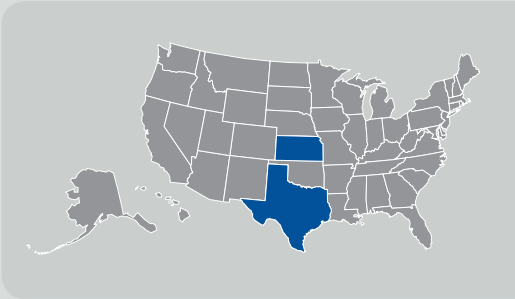
DESCRIPTION

Rivet Joint is the DoD's premier manned airborne SIGINT platform. It is a self-contained collection, processing, analysis, and dissemination system. Rivet Joint rapidly fields tactical SIGINT capabilities to support the full spectrum of combat operations and national information needs. Rivet Joint flies over 700 airborne reconnaissance missions each year.



CONTRACTORS

Prime: Major Subsystems
- L-3 Communications (TX);
Subcontractor(s): Propulsion -
General Electric; Engine - Boeing (KS)



SPECIFICATIONS

Weight	322,500 lb. maximum take-off gross weight; 170,000 lb. aircraft basic weight
Range	5,000+ miles unrefueled; inflight refueling capable
Dimensions	Length: 140 ft.; Wingspan: 131 ft.; Height: 42 ft.
Speed	500 mph
Duration	8–10 hours unrefueled, limited only by aircrew duty requirements if aerial refueled

ACQUISITION STATUS

Program Status	Modification and Sustainment
Unit Assignment	55th Wing, Offutt AFB, NE
Current Inventory	17 mission aircraft plus two flight deck trainer aircraft

MISSION

Provide the Air National Guard with a highly mobile aircraft Intelligence, Surveillance, and Reconnaissance (ISR) platform for use in counter-drug and counter-narcoterrorism operations, as well as other mission support areas.



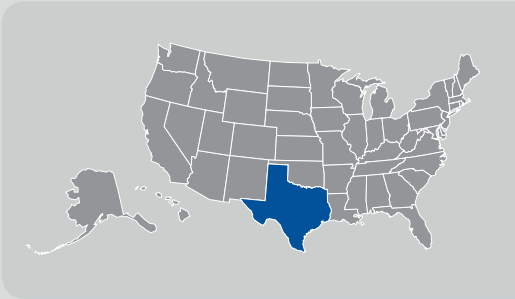
DESCRIPTION

The RC-26B is a highly mobile ISR platform for use in counter-drug and counter narco-terrorism operations. It also provides mission support for SOUTHCOM, NORTHCOM, the Department of Homeland Security, and the United States Secret Service supporting national special security events, crisis/disaster response, maritime patrol, homeland defense, and the Global War on Terrorism. The RC-26B features a small logistics footprint that can rapidly deploy in support of counter-drug and contingency operations. The system consists of an ElectroOptical Forward Looking Infrared Radar (FLIR) camera for video recording and two still cameras (digital and wet film). The aircraft is operated by two pilots and a missions system operator. Typically there is a law enforcement official or other agency representative on the aircraft to direct the operation, and ensure mission requirements are met.



CONTRACTOR

Prime: ATK Mission Research
**Integrated Systems (TX); Contract
maintenance -** M7 Aerospace (TX)



SPECIFICATIONS

Weight	16,500 lb. gross weight
Range	Range: 1,200 nautical miles (NM) ; Service Ceiling: 25,000 ft.; Top Speed: 250 kN.
Dimensions	Wingspan: 57 ft.; Length: 59.35 ft.; Height: 16.66 ft.

ACQUISITION STATUS

Program Status	Operational
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MISSION

Maintain active control and management of Air Force excess ballistic missile assets and provide cost-reimbursable orbital and sub-orbital launch services for government agencies using refurbished missile motors.

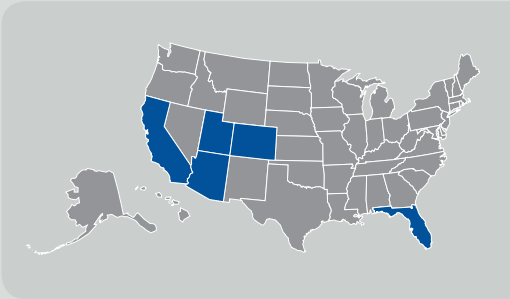


DESCRIPTION

The Rocket Systems Launch Program (RSLP) stores deactivated Intercontinental Ballistic Missile (ICBM) motors, both Minuteman II and Peacekeepers. It performs aging surveillance on stored motors, provides cost-reimbursable launch services including payload integration, refurbishment, and transport of motors and boosters. The program provides launch operations via the Orbital/Sub-orbital contract (Minotaur I, II, III, IV); the Sounding Rocket contract; or the Responsive Small Spacelift contract (Falcon 1, Raptor 1 and Raptor 2). Refurbishment of motors saves government customers ~ \$30 million/year versus the cost of new motors and avoids ~\$370 million in missile motor destruction costs. The RSLP is designated as a single DoD agency providing launch vehicle support for DoD and other government agency RDT&E launches on a cost-reimbursable basis. It has provided launch support for 650 launches since 1962.

CONTRACTORS

Prime: Aerojet (CA); ATK Aerospace (UT); Space-X (CA); Orbital Sciences (AZ); Coleman Research (FL); Lockheed Martin (CO); Space Vector (CA)



SPECIFICATIONS

Capacity/Satellite	Minotaur I: 1,280 lb. to Low Earth Orbit (LEO); Minotaur IV: 3,800 lb. to LEO; Falcon 1: 1,075 lb. to LEO; Raptor 1: 1,115 lb. to LEO; Raptor 2,559 lb. to LEO (expected performance, have not launched yet)
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ACQUISITION STATUS

Program Status	Two orbital launches aboard Minotaur I launch vehicles in FY05 (Space Test Program (STP)-R1 in 4QFY05; XSS-11 in 3QFY05); Supporting MDA's intercept tests by providing targets; total of eight launches and four static firings in FY05 successfully supported Army, Navy, Air Force, and Missile Defense Agency missions; transferred Peacekeeper program responsibility from ICBM System Program Office (SPO) to RSLP on October 1, 2005
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MISSION

Provide commanders with near-real-time, high-resolution, Intelligence, Surveillance, and Reconnaissance (ISR) imagery.



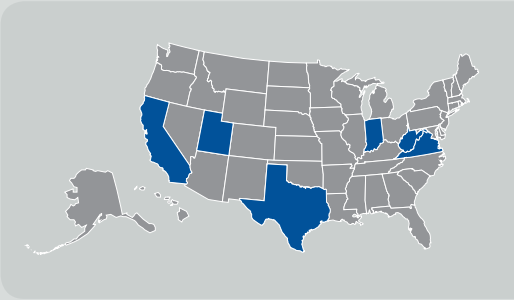
DESCRIPTION

The RQ-4A/B Global Hawk combines speed, range, and unmanned endurance and incorporates state-of-the-art imagery and signals intelligence sensors, as well as satellite reachback communication link capability. Cruising at extremely high altitudes, Global Hawk can survey large geographic areas with pinpoint accuracy, giving military decision makers the most current information about enemy location, resources, and personnel. During a typical mission, the Global Hawk can fly 1,200 miles to an area of interest and remain on station for 24 hours. Its sensors can image an area the size of Illinois (40,000 nautical square miles) in just 24 hours. These capabilities provide persistent, near-real-time, situational awareness information for the battlefield or for natural disaster emergency operations.



CONTRACTORS

Prime: Northrop Grumman (CA); Raytheon (CA); Raytheon (VA); L-3 Communications (UT); Vought (TX); Rolls Royce (IN); Aurora (WV)



SPECIFICATIONS

Size	RQ-4A - Length: 44 ft.; Wingspan: 116 ft.; Height: 15 ft. RQ-4B - Length: 47 ft.; Wingspan: 131 ft.; Height: 15 ft.
Weight	RQ-4A - 26,750 lb. take-off gross weight RQ-4B - 32,250 lb. T/O GW
Range	Approximate range for RQ-4A and RQ-4B is 10,000 mi.
Coverage	Varies by aircraft Block: Block 10 - Radar and EO/IR sensors Block 20 - Enhanced (more range) Radar and EO/IR sensors Block 30 - Same Radar and EO/IR sensors as Block 20 plus SIGINT sensor Block 40 - Active Electronic Scanned Array Radar sensor
Capacity/Satellite	Sensor Data: Beyond Line of Sight (BLOS) wideband: Commercial Ku SATCOM - up to 48 mbps; Gov ETP SATCOM: classified mbps rate; Line of sight KU-Band or X-Band CDL -selectable 10.7, 137, or 274 mbps rates; Future Wideband BLOS: Plan is to add 274 mbps KA capability via FAB-T program around 2013, followed by 1.1 gbps laser communication capability
Interoperability	Sensor data provided via commercial or government data links and is interoperable with Modular Interoperable Surface Terminal (MIST), Tactical Interoperable Ground Data Link (TIGDL) or other (Army and Navy) CDL -compatible surface terminals. IMINT sensor data meets NITF 2.1 standards.
Compatibility	Sensor data can be sent to Global Hawk ground station, Air Force Distributed Common Ground System (DCGS), or Army and Navy ground stations. IMINT data can be injected onto the WAN by DCGS for use by other intelligence network customers.

ACQUISITION STATUS

Program Status	Low Rate Initial Production
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SENSOR FUSED WEAPON (SFW)

MISSION

Conduct persistent surface attacks and destroy moving and fixed land combat vehicles, including main battle tanks, providing multiple kills per weapon.



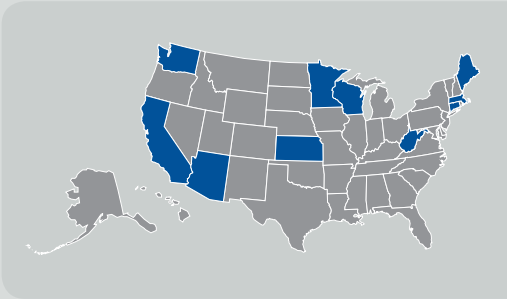
DESCRIPTION

The Sensor Fused Weapon (SFW) contains 10 BLU-108 submunitions, each with four projectiles, for a total of 40 independently targeted warheads. The warheads have an active laser and passive infrared (IR) sensors. The 40 warheads search a target area up to 30 acres and fire an Explosively Formed Projectile (EFP) into the target designated by correlating the active and passive sensor signatures. The kill mechanism is an EFP copper liner formed with 2.2 lb. of PBXN-11 explosive. The explosive force forms the copper into an armor penetrating projectile accelerated to hypervelocity.



CONTRACTORS

Prime: Textron (MA)
Subcontractor(s): Day & Zimmerman Inc (KS); Alliant Techsystems (WV, WI); General Dynamics (WA); Hi Shear (CA); Kurt Manufacturing (MN); Pacific Scientific (AZ); Pioneer Aerospace (CT); Reynard Corp (CA); Tundra Semiconductor (ME)



SPECIFICATIONS

Weight	920 lb.
Range	Three SFW configurations: CBU-97 (static tail): ballistic trajectory; CBU-105 (Wind Corrected Munition Dispenser (WCMD) tail): 10 nautical miles (NM); CBU-115 (WCMD-ER wing/tail): 35 NM
Armament	10 BLU-108 submunitions
Dimensions	Length: 91 in.; Diameter: 15.6 in.
Coverage	The 40 warheads scan a target area up to 30 acres (1,600 ft. x 700 ft.).
Compatability	The following aircraft can employ the SFW: CBU-97: F-16, F-15E, A-10, B-52, B-1B, B-2; CBU-105: F-16, F-15E, B-52, B-1B; CBU-115: F-16

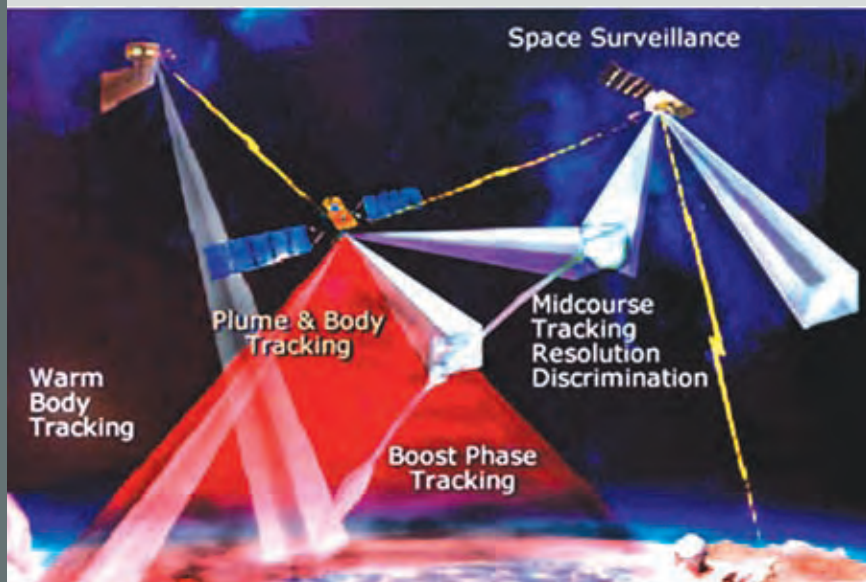
ACQUISITION STATUS

Program Status	Awarded 10th Full Rate Production Contract; Production ends FY12
Current Inventory	3,230
Projected Inventory	6,500

SPACE BASED INFRARED SYSTEM HIGH (SBIRS HIGH)

MISSION

The Space Based Infrared System's (SBIRS) primary mission is to provide initial warning of a ballistic missile attack on the United States, its deployed forces, or allies.



DESCRIPTION

The Space Based Infrared System High (SBIRS High) is an infrared detecting satellite system that is the follow-on to the current Defense Support Program (DSP) missile warning satellites. SBIRS consolidates the national and DoD's infrared detection systems into a single overarching architecture that fulfills the nation's security needs in the areas of missile warning, missile defense, technical intelligence, and battlespace characterization. SBIRS consists of three Geosynchronous Earth Orbit (GEO) satellites, two Highly Elliptical Orbit (HEO) payloads, a Mission Control Station and Backup, Relay Ground Stations in Europe and the Pacific, and nine mobile multi-mission processors. SBIRS enables continuous global surveillance, tracking, and targeting of multiple objects in multiple areas of responsibility, and surveillance of infrared sources of operational, intelligence, and national significance.



CONTRACTORS

Prime: Lockheed Martin Space Systems (CA)
Subcontractor(s):
Northrop Grumman Electronic Systems (CA)



SPECIFICATIONS

Weight	6,289 lb. (GEO)
Dimensions	6 x 7 x 17 ft. (stowed)
Coverage	Continuous global coverage
Interoperability	Interoperable with Cheyenne Mountain Operations Center and other strategic users via the Survivable Communications Integrated System, with theater missile warning networks via the Integrated Broadcast System in Link 16 format, with ballistic missile defense BMC3, and with the Space Battle Management Core System

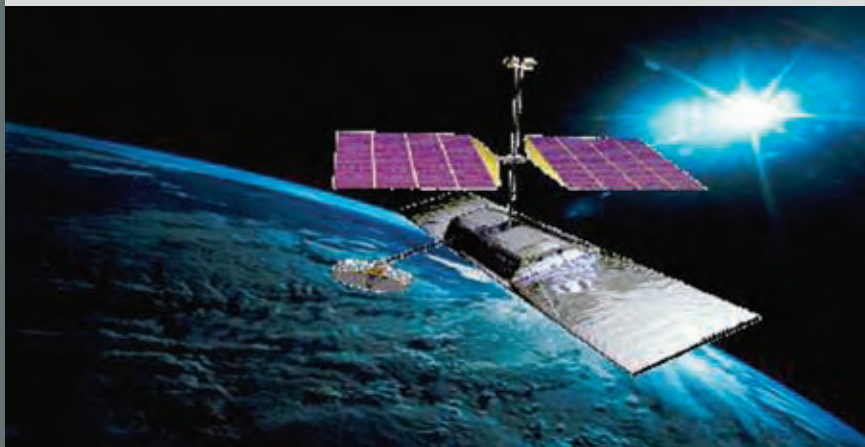
ACQUISITION STATUS

Program Status	SBIRS High is in System Development and Demonstration. Increment 1 ground segments at the Mission Control Station and Interim MCS Backup are operational and process and disseminate current DSP data. HEO payloads 1 and 2 have been delivered to the classified satellite host for integration. GEO satellites 1 and 2 have over 90 percent of their components delivered and are in various stages of assembly, integration, and testing. Relay Ground Station-Europe was outfitted with all mission and communications equipment in 2005. The Mission Control Station Backup-HEO at Schriever AFB, CO, is in equipment fit-up and check out.
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SPACE RADAR (SR)

MISSION

Provide the deep-look, all-weather, day-and-night surveillance and reconnaissance capabilities required by both national intelligence and joint warfighters.



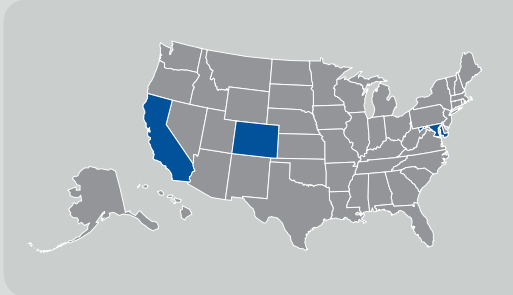
DESCRIPTION

The Space Radar (SR) system will be part of an integrated Intelligence, Surveillance, and Reconnaissance (ISR) system of systems. SR will provide rapid Battlespace Dominance and Operational Decision Superiority through Synthetic Aperture Radar (SAR) imagery, Surface Moving Target Indication (SMTI), High Resolution Terrain Information (HRTI), Measurement and Signature Intelligence (MASINT), and Open Ocean Surveillance (OOS). Exact surveillance capabilities and numbers of spacecraft are subject to technical and trade space considerations that are being evaluated as part of the ongoing concept development phase.



CONTRACTORS

Prime: Lockheed Martin (CO); Northrop Grumman Space Technology (NGST) (CA)
Subcontractor(s): Northrop Grumman Electronic Systems (for both Lockheed Martin and NGST) (MD); Boeing (for Lockheed Martin) (CA)



SPECIFICATIONS

None

ACQUISITION STATUS

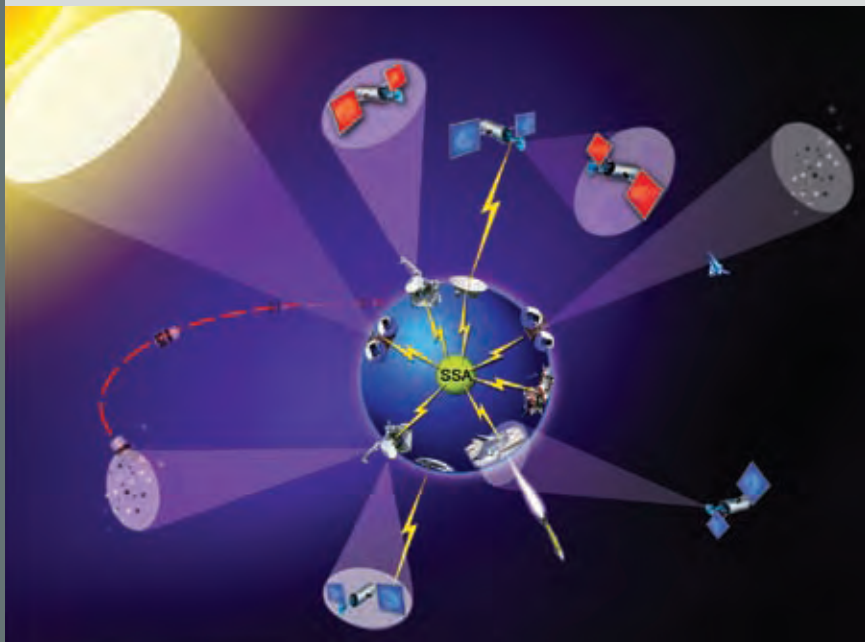
Program Status	Acquisition Phase A (Concept Development), Concept and Architecture Development
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ADDITIONAL INFORMATION

The Office of the Secretary of Defense (SECDEF) and the Director of Central Intelligence (DCI) signed an agreement (January 2005) committing to Space Radar as the single space radar capability for the nation. The Space Radar Program Office is located in Chantilly, VA, and reports directly to the Undersecretary of the Air Force.

MISSION

Develop, integrate, and disseminate knowledge of all ongoing activities related to space operations, including intelligence, surveillance, reconnaissance, and environmental monitoring activities.



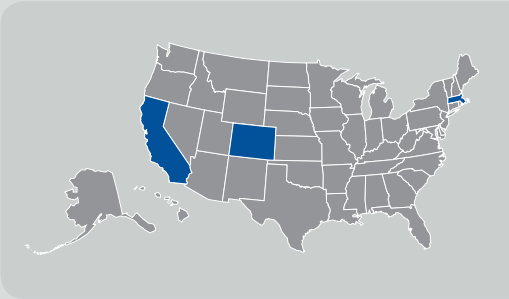
DESCRIPTION

The Space Situation Awareness (SSA) Network is a worldwide network of electro-optical and radar sensor systems with associated Command and Control (C2), data processing, and analysis capabilities. SSA provides data on space events and activities, including space object locations/breakups/decaying orbits, satellite attack warnings, overhead threat warnings, space treaty monitoring, and object identification/mission payload assessment of foreign satellites. The system can find, fix, track, and characterize space objects. Data is gathered, integrated, and disseminated to aid C2 for space and other missions.



CONTRACTORS

Prime: Eglin Upgrade - ITT Industries (CO); Haystack Upgrade - MIT Lincoln Laboratory (MA); SBSS - Northrop Grumman (CA); Space Fence - Contractor TBD; C2 - Various contractors
Subcontractor(s): SBSS - Boeing (CA); Ball Aerospace (CO)



SPECIFICATIONS

Size	Eight dedicated, eight collateral, and 13 contributing sensors. Dedicated assets provide full-time support to the SSA mission; collateral sensors provide data for SSA as a secondary mission, and contributing assets are operated by non-U.S. Strategic Command organizations, but provide data under contract.
Dimensions	Characteristics vary per sensor
Coverage	Worldwide surveillance of near earth and deep space orbits. Individual sensor coverage areas vary

ACQUISITION STATUS

Program Status	Development underway for Eglin Radar Life Extension, Haystack radar upgrade, new Space-Based Space Surveillance (SBSS) constellation of optical satellites, Space Fence ground radar network, and C2/integration initiatives
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MISSION

Facilitate the advancement of space systems technology—ultimately enabling space superiority by developing new space capabilities.

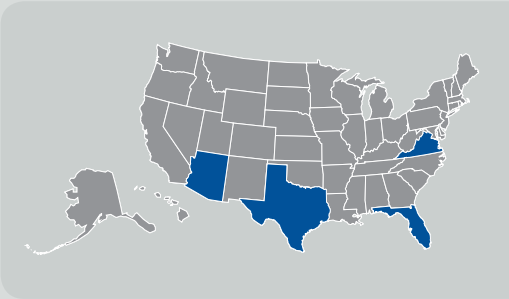


DESCRIPTION

The Space Test Program (STP) is DoD's primary program for spaceflight testing. As executive agent, the Air Force provides priority-based, fly-before-buy spaceflight testing opportunities for research and development (R&D) experiments and technology demonstrations from the entire DoD space research community (e.g., Air Force, Navy, Army, Missile Defense Agency, National Reconnaissance Office, and others). The types of experiments supported range from basic research to advanced development. The STP acts as the primary interface between NASA's Human Spaceflight programs (including the Space Shuttle and International Space Station) and the DoD. It performs risk reduction through direct flight test of prototype components and is responsible for all auxiliary payload flight opportunities on Air Force launch vehicles. STP flight tests new space system technologies and improves operational spacecraft design by characterizing the space environment, event, or sensor physics proposed for an operational system/system upgrade.

CONTRACTORS

Prime: C/NOFS-Spectrum Astro (AZ); STP-1-AeroAstro (VA); STP-1-Boeing (FL)
Subcontractor(s): Shuttle
Integrator- Muniz Engineering (TX)



SPECIFICATIONS

Size	Efforts support multiple experiments ranging from 50 to 72,000,000 cubic centimeters
Weight	Efforts support multiple experiments ranging from 0.15 to 4,170 kg
Range	Efforts support multiple experiments ranging from 90 to 36,000 km
Dimensions	Efforts support multiple experiments ranging from 50 to 72,000,000 cu cm
Coverage	Dependent upon specific experiment
Capacity/Satellite	Dependent upon specific experiment
Interoperability	Dependent upon specific experiment
Compatibility	Dependent upon specific experiment with emphasis on improving operational spacecraft design by characterizing the space environment, event, or sensor physics proposed for an operational system/system upgrade and provides early operational capabilities to evaluate usefulness or quickly react to new developments

ACQUISITION STATUS

Program Status	CloudSat: NASA weather experiment. STP will provide on-orbit operations for the mission. Scheduled to launch in mid-2006. Communication/Navigation Outage Forecasting System (C/NOFS) mission on Pegasus: Forecast ionospheric scintillations that degrade communication, navigation, and surveillance systems. Possible launch date in late FY06 or FY07. STP-1: STP mission utilizing the first Evolved Expendable Launch Vehicle (EELV) Secondary Payload Adapter (ESPA) on an EELV Medium (Atlas V), which will launch seven satellites from 12 experimental programs including DARPA's Orbital Express which will demonstrate autonomous satellite servicing including on-orbit refueling. Scheduled to launch on 12 October, 2006. Standard Interface Vehicle Contract Award in 2QFY06.
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MISSION

Provide advanced-phase Specialized Undergraduate Pilot Training (SUPT) for students selected to fly airlift or tanker aircraft.

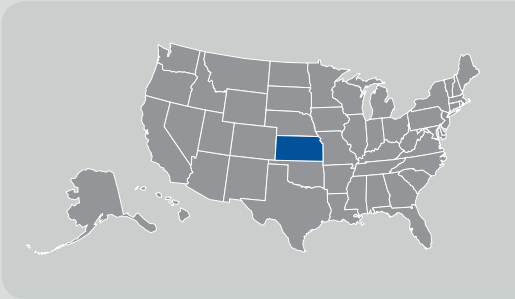


DESCRIPTION

The T-1A Jayhawk is a medium-range, twin-engine jet trainer used in the advanced phase of SUPT. It is also used to support navigator training for the U.S. Air Force, Navy, Marine Corps, and international military services. It features cockpit seating for an instructor and two students and is powered by twin turbofan engines capable of an operating speed of Mach .78.

CONTRACTORS

Prime: Raytheon (KS)



SPECIFICATIONS

Weight	16,100 lb.
Range	2,222 nautical miles (NM)
Dimensions	Length: 48 ft. 5 in.; Height: 13 ft. 11 in.; Wingspan: 43 ft. 6 in.

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Laughlin AFB, TX; Randolph AFB, TX; Vance AFB, OK; Columbus AFB, MS

MISSION

Train entry-level pilots in the fundamentals of flight.

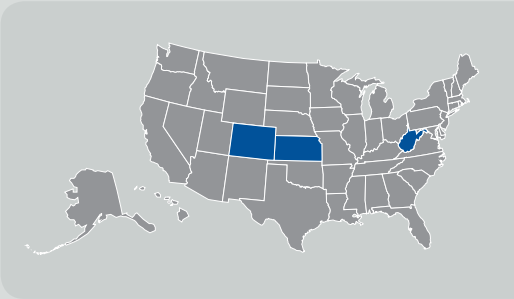


DESCRIPTION

The T-6A Texan II is the Joint Primary Aircraft Training System (JPATS) aircraft. It replaces the USAF T-37B and the USN T-34C. The JPATS improves training, enhances safety, and offers increased aircrew accommodation. It also includes a Ground-Based Training System (GBTS) that includes Aircrew Training Devices (ATD), a Computer Based Training System (CBTS), courseware, and a Training Integration Management System (TIMS).

CONTRACTORS

Prime: Raytheon (KS)
Subcontractor(s): **Engine** - Pratt & Whitney Canada (WV); **Escape System** - Martin Baker Aircraft/Middlesex (UK); **Avionics**-Honeywell Aerospace Electronic Systems/Olathe (KS), Smiths Aerospace Electronic Systems/Cheltenham (UK); **Ground-Based Training System (GBTS)** - Flight Safety Services Corp. (CO)



SPECIFICATIONS

Weight	6,500 lb.
Range	800+ nautical miles (NM)
Dimensions	Wingspan: 33.4 ft.; Length: 33.3 ft.; Height 10.6 ft.
Interoperability	Joint US Air Force/US Navy (USAF/USN) primary trainer aircraft
Compatibility	Joint USAF/USN primary trainer aircraft
Service Ceiling	Maximum Operating Altitude - 31,000 ft.
Speed	320 mph

ACQUISITION STATUS

Program Status	Full Rate Production (Fielding and Sustainment); for FY06, acquire 54 USAF aircraft; continue Ground-Based Training System (GBTS) acquisition; production planned through FY08 (USAF) and FY13 (USN); Projected Inventory: 780 total (452 USAF and 328 USN)
Unit Assignment	Laughlin AFB, TX; Randolph AFB TX; Vance AFB, OK; Columbus AFB, MS; Sheppard AFB, TX; Moody AFB, GA
Future Upgrades	Numerous minor enhancements; Traffic Alert and Collision Avoidance System (TCAS) upgrade

T-37B TWEET

MISSION

Provide the primary phase—Phase II—of Specialized Undergraduate Pilot Training to fill Air Force requirements for new pilots.

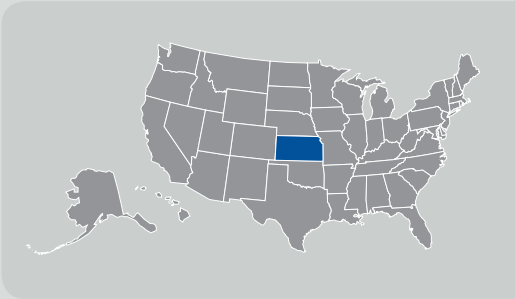


DESCRIPTION

The T-37B Tweet is a twin-engine jet used for training joint specialized undergraduate pilot students in the fundamentals of aircraft handling and instrument, formation, and night flying. The T-37B has been used since the 1950s to train Air Force pilots. Since the mid-1990s, the Air Force has gradually been procuring the T-6A Texan II as a follow-on aircraft to replace the aging T-37. All T-37s will be retired by the end of FY08.

CONTRACTORS

Prime: Cessna (KS)



SPECIFICATIONS

Weight	6,625 lb.
Range	460 nautical miles (NM)
Dimensions	Length: 29 ft. 3 in.; Height: 9 ft. 2 in.; Wingspan: 33 ft. 8 in.

ACQUISITION STATUS

Program Status	All T-37s will be retired by the end of FY08
Unit Assignment	Randolph AFB, TX; Vance AFB, OK; Columbus AFB, MS; Sheppard AFB, TX
Current Inventory	Active Force, 419; Air National Guard (ANG), 0; Reserve, 0

MISSION

Provide specialized pilot training, meeting pilot requirements of fighter/bomber crews.



DESCRIPTION

The T-38A Talon is a twin-engine, high-altitude, supersonic jet trainer used in a variety of training roles, including Phase III of Specialized Undergraduate Pilot Training (SUPT) and Introduction to Fighter Fundamentals (IFF). The T-38 is also used as a companion trainer for some Air Combat Command aircraft such as the U-2, B-2, and F-117. Several T-38s are used as part of the Air Force Test Pilot School program. The T-38A has swept wings, a streamlined fuselage and tricycle landing gear with a steerable nose wheel. The T-38C incorporates a “glass cockpit” with integrated avionics displays, head-up display and an electronic “no drop bomb” scoring system. The AT-38B has a gun sight and practice bomb dispenser.

CONTRACTORS

Prime: Airframe - Northrop Grumman (CA); Avionics - Boeing (MO); Engines - GE (MA); Escape System - Martin Baker Aircraft/ Middlesex (UK)



SPECIFICATIONS

Weight	12,093 lb.
Range	1,093 nautical miles (NM)
Dimensions	Length: 46 ft., 4 in.; Height: 12 ft., 10 in.; Wingspan: 25 ft., 3 in.

ACQUISITION STATUS

Program Status	By the end of FY07, all Air Education and Training Command T-38s will be upgraded to T-38C status, which installs a “glass” cockpit and Global Positioning System. Current service life for the T-38C is projected to 2020. The T-38A and AT-38B are both going through the Avionics Upgrade Program (AUP) to be converted to the T-38C.
Unit Assignment	Randolph AFB, TX; Vance AFB, TX; Sheppard AFB, TX; Laughlin AFB, TX; Moody AFB, GA; Columbus AFB, MS

MISSION

Provide navigator training for Air Force personnel.

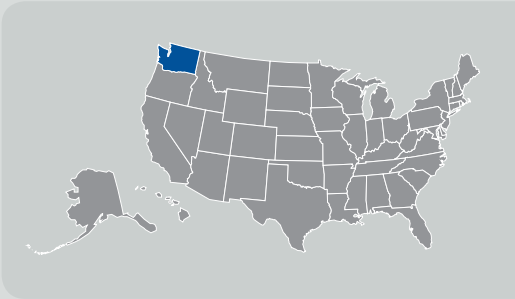


DESCRIPTION

The T-43A is the Air Force's primary navigation trainer and provides the pipeline for new navigators. Graduates are awarded the rating of basic navigator. The T-43A crew consists of the flight crew, 12 student navigators, and six instructors. The T-43A will be retired by FY10 and replaced with consolidated navigator training at Pensacola NAS, FL, in accordance with Base Realignment and Closure (BRAC) requirements.

CONTRACTORS

Prime: Boeing (WA)



SPECIFICATIONS

Weight	115,000 lb.
Range	2,995 nautical miles (NM)
Dimensions	Length: 100 ft.; Height: 37 ft.; Wingspan: 93 ft.

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Randolph AFB, TX

TACTICAL AIR CONTROL PARTY (TACP) AND AIR SUPPORT OPERATIONS CENTER (ASOC)

MISSION

Advise ground commanders regarding the capabilities and limitations of air power and assist the ground commander in planning, requesting, and coordinating close air support (CAS.)



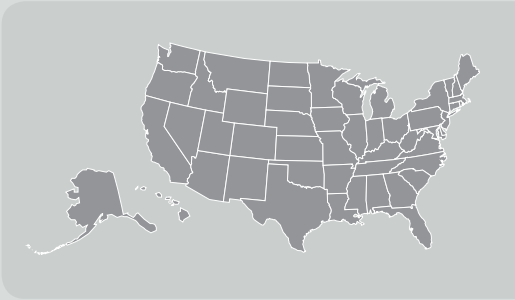
DESCRIPTION

The Tactical Air Control Party (TACP) is the principal Air Force liaison element aligned with Army maneuver units from the battalion through the corps levels. The primary mission of the TACPs is to advise ground commanders on the capabilities and limitations of air power to assist in planning, requesting, and coordinating CAS. TACP provides the primary terminal attack control for CAS in support of ground forces. ASOC is the primary control agency component of the TACS for the execution of CAS. Co-located with the Army senior echelon's fire support element (FSE), ASOC coordinates and directs air support for Army or joint force land component operations. In a multi-corps environment, there is one ASOC with each corps, reporting individually to the FSE. ASOC may be co-located with a field Army or a division engaged in independent operations. The Air Force Air and Space Operations Center (AFAOC) may grant the ASOC control (launch or divert authority) of missions designated to it on the air tasking order (ATO).



CONTRACTORS

Prime: TBD



SPECIFICATIONS

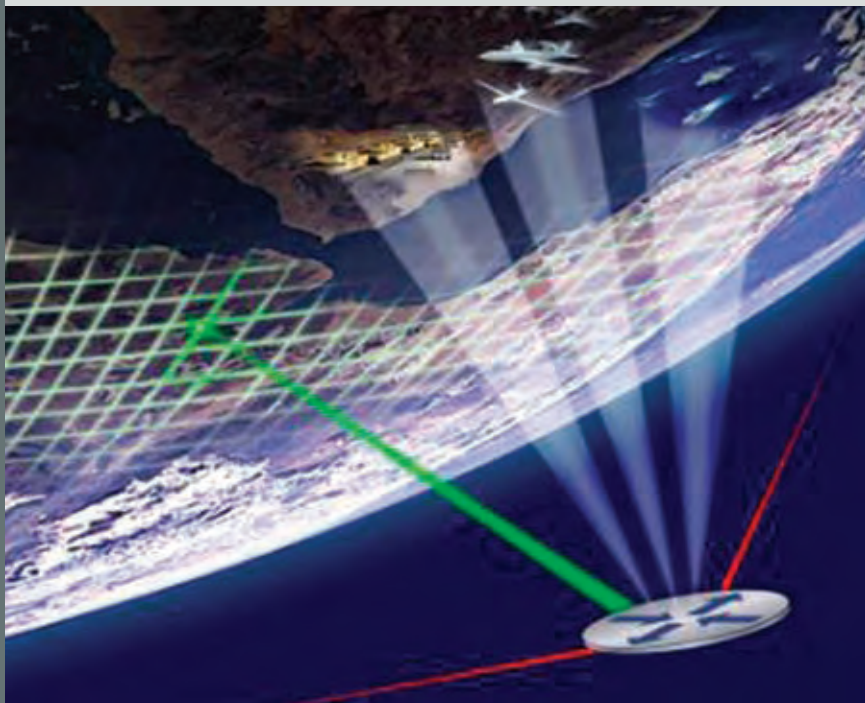
Size	Total Force: Officers - 428, Enlisted - 2,381; Active Duty only: Officers - 261, Enlisted - 1,637
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ACQUISITION STATUS

Program Status	TBD
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MISSION

Provides wideband tactical, protected tactical, mobile tactical, strategic, and relay communications to DoD, government, and allied forces/international partners.



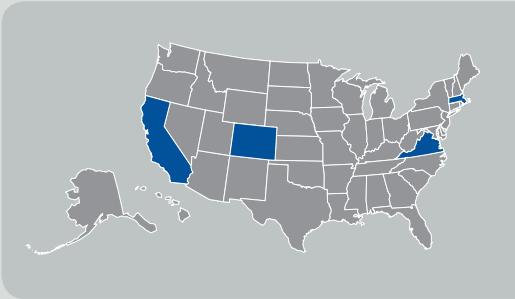
DESCRIPTION

The Transformational Satellite Communications System (TSAT) is a next-generation communication satellite system that provides strategic and tactical protected communications. TSAT incorporates laser communications and packet routing/switching protocols to provide a high bandwidth environment. It extends the DoD ground-based Global Information Grid network to deployed and mobile users and provides assured command and control to strategic forces. It delivers medium and high-data-rate wideband communications exfiltration from Information, Surveillance, and Reconnaissance (ISR) assets. TSAT increases throughput to tactical users, allowing communications-on-the-move and persistent worldwide connectivity of ISR assets. TSAT interfaces across the satellite communications (SATCOM) systems of other agencies. It consists of a five-satellite space segment and a ground segment TSAT Mission Operations System (TMOS).



CONTRACTORS

Prime: **Space Segment** - Lockheed Martin (CA), Boeing (CA); **TMOS/ Network Segment** - Raytheon (CO); Lockheed Martin (CA); Northrop Grumman (VA); **Systems Engineering and Integration** - Booz Allen Hamilton (VA)
Subcontractor(s): Northrop Grumman (CA); Raytheon (CO, MA); Ball Aerospace (CO); Cisco (CA)



SPECIFICATIONS

Weight	11,600 lb (direct injection); 23,250 lb (geosynchronous transfer orbit)
Coverage	Global Coverage 65° N–65° S
Capacity/Satellite	Protected EHF: 45 Mbps max data rate; 2,340 Mbps loaded throughput; Wideband Ka: 311 Mbps max data rate (uplink only); 933 Mbps loaded throughput (uplink only); Laser: 2,400 Mbps data rate (terminal constrained); 4,880 Mbps loaded throughput (terminal constrained)
Interoperability	Space-based component of DoD Global Information Grid
Compatability	Backwards compatible to Advanced Extremely High Frequency (AEHF) Extended Data Representation (XDR) terminals

ACQUISITION STATUS

Program Status	System Requirements Review (SRR) (1QFY04); Interim Program Review 1 (1QFY05); Key Decision Point-B (2QFY05); TSAT Mission Operations System down-select planned for 2QFY06; Space System Design Review (SDR) (3QFY07); TSAT Space Segment currently in competition; Down-select planned for 1QFY08; First launch planned for 4QFY14
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MISSION

Provide near-real-time intelligence from high-altitude/near space to support operations across the spectrum of conflict.



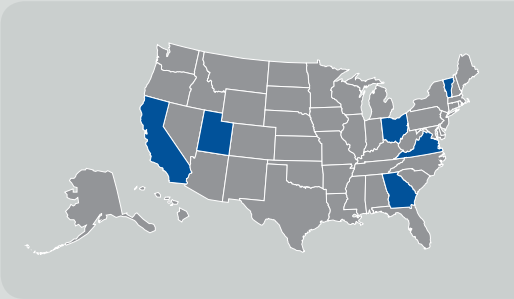
DESCRIPTION

The U-2 weapon system consists of the aircraft, sensors, and data links, and combines high-altitude/near space and over-flight and stand-off sensor capabilities. The U-2 provides all-weather surveillance and reconnaissance, day or night, in direct support of U.S. and allied forces. It delivers critical Imagery Intelligence (IMINT), signals intelligence (SIGINT), and Measurement and Signature Intelligence (MASINT) to decision makers throughout all phases of conflict, including peacetime indications and warnings, low-intensity conflict, and large-scale hostilities. The U-2S is a single-seat, single-engine aircraft. Long and narrow wings give the U-2 glider-like characteristics and allow it to quickly lift heavy sensor payloads to unmatched altitudes, keeping them there for extended periods of time.



CONTRACTORS

Prime: Airframe - Lockheed Martin (CA)
Subcontractor(s): Sensors - Raytheon (CA); **Major Subsystem** - L-3 Communications (VA); **Propulsion** - General Electric (UT); **Sensors** - B.F. Goodrich (OH); Northrop Grumman (VT); BAE (GA)



SPECIFICATIONS

Weight	40,000 lb. takeoff gross weight
Range	7,000+ miles
Dimensions	Length: 63 ft.; Wingspan: 104 ft.; Height: 16 ft.
Coverage	Wide Area coverage due to high altitude. Sensor Data: Varies by aircraft/sensor configurations - Radar and SIGINT, or EO/IR and SIGINT; includes an Optical Bar Camera capability configuration that provides Synoptic Broad Area coverage.
Interoperability	Sensor data currently provided via Ku or X-band Line of Sight (LOS) or government Beyond Line of Sight (BLOS) data links and is interoperable with Distributed Common Ground Station (DCGS) systems (including compatible Army, Navy and Marine Corp) surface terminals. IMINT sensor data meets National Imagery Transmission Format.
Compatability	Sensor data can be sent to MOBSTER (ground relay station), direct to satellite for BLOS link or DCGS ground stations. IMINT data can be injected onto the WAN by DCGS for use by other intelligence network customers.
Altitude	70,000+ ft.
Endurance	> 10 hours
Payload	5,000 lb.; Multi-INT (simultaneous)
Speed	410+ mph

ACQUISITION STATUS

Program Status	Sustainment
Current Inventory	33 aircraft - 28 single seat and five two-seat trainers
Future Upgrades	Aircraft wiring, cockpit, and sensor upgrades; Glass Cockpit (Block-20); Defensive System RWR/JAM; ASARS-2A Radar; SYERS-2 EO/IR; Dual Data Link/Link-16; SIGINT

UH-1N HELICOPTER (VARIANTS: UH-1N, 1H/VM UV-18B)

MISSION

Provide Intercontinental Ballistic Missile (ICBM) and range security, distinguished visitor evacuation and airlift, and test and survival school support.



DESCRIPTION

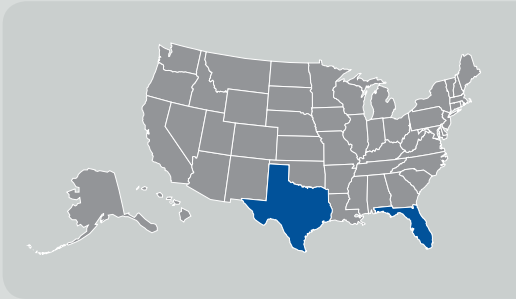
The UH-1N Huey is a light-lift, utility helicopter used at 10 operating locations at six major commands. The UH-1N and its variants, 1H/Vm and UV-18B, provide ICBM and Range security, distinguished visitor evacuation and airlift, and test and survival school support.



CONTRACTORS

Prime: Bell Helicopter
Company (TX)

Subcontractor(s): Aerospace
Integration Corporation (FL)



SPECIFICATIONS

Range	300 nautical miles (NM)
Dimensions	Length: 57 ft., 7 in.; Width: 9 ft., 5 in.; Height: 12 ft., 10 in.; Rotor: 48 ft.

ACQUISITION STATUS

Program Status	Fielded
Unit Assignment	Andrews AFB, MD; Malmstrom AFB, MT; Vandenburg AFB, CA; F.E. Warren AFB, WY; Minot AFB, ND; Kirtland AFB, NM; Eglin AFB, FL; Hurlburt AFB, FL; Yakota AFB, Japan
Future Upgrades	Undergoing life extension programs

MISSION

Provide worldwide air transport for the President of the United States.



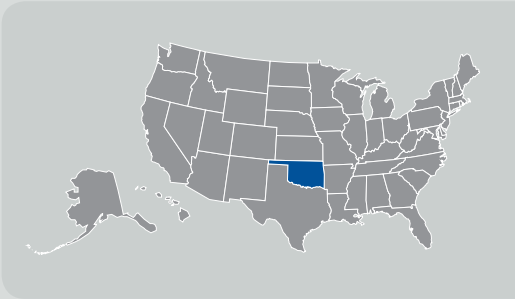
DESCRIPTION

The VC-25A is a military variant of the commercial Boeing 747-200 equipped with robust communications and data transfer systems that enable the President to implement the constitutional roles of commander-in-chief of the Armed Forces, head of state, and chief executive while travelling. It is known as "Air Force One" when the President is aboard.



CONTRACTORS

Prime: Airframe, Engines - Boeing
Integrated Defense System (OK)



SPECIFICATIONS

Weight	833,000 lb.
Range	6,800 nautical miles (NM)
Dimensions	Length: 232 ft.; Height: 63 ft.; Wingspan: 196 ft.
Service Ceiling	45,000 ft.
Speed	570 mph (Mach 0.84)
Passenger Capacity	76 passengers and 26 crew

ACQUISITION STATUS

Program Status	Sustainment
Unit Assignment	Andrews AFB, MD
Current Inventory	2
Future Upgrades	Presidential Data System (PDS), Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

MISSION

Supports national level consumers by collecting particulate and gaseous effluents and debris from accessible regions of the atmosphere in support of the Limited Nuclear Test Ban Treaty of 1963, which prohibits any nation from above ground nuclear weapons testing.



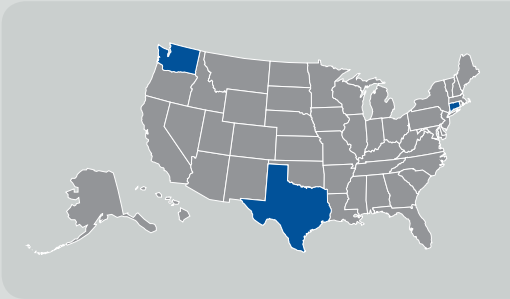
DESCRIPTION

Constant Phoenix is currently the only aircraft in the inventory conducting air-sampling operations. The aircraft's on-board atmospheric collection suite allows the mission crew to detect radioactive clouds in real-time. The aircraft is equipped with external flow-through devices to collect particulates on filter paper and a compressor system for whole air samples collected in holding spheres.



CONTRACTORS

Prime: Major Subsystems: L-3 Communications, Raytheon, Harris Information Systems (TX)
Subcontractor(s): Propulsion- Pratt & Whitney (CT); Airframe- Boeing (WA)



SPECIFICATIONS

Weight	299,000 lb. maximum gross take-off weight; 130,000 lb. aircraft basic weight
Range	5,000 + miles unrefueled; inflight refueling capable
Dimensions	Length: 140 ft.; Wingspan: 131 ft.; Height: 42 ft.
Speed	500 mph
Duration	8–10 hours unrefueled, limited only by aircrew duty requirements if aerial refueled

ACQUISITION STATUS

Program Status	Modification and Sustainment
Unit Assignment	55th Wing, Offutt AFB, NE
Current Inventory	Two mission aircraft

WIDEBAND GAFILLER SYSTEM (WGS)

MISSION

Provide beyond-line-of-sight and long-haul communication relay from geosynchronous orbit 22,000 miles above the earth's surface.



DESCRIPTION

The Wideband Gapfiller System (WGS) provides unprotected wideband communications for deployed forces and warfighter communications using existing terminals. It is a follow-on to Defense Satellite Communications System (DSCS) satellites and takes on the Global Broadcast Service (GBS) mission. The system consists of five satellites using existing and new wideband terminals.



CONTRACTORS

Prime: Boeing Satellite Systems (CA)



SPECIFICATIONS

Size	Five-satellite constellation
Weight	13,100 lb.
Coverage	Global Coverage: 65° N–65° S
Capacity/Satellite	Wideband Ka / X mix: 137 (SV 1-3), 274 (SV 4-5) Mbps max data rate; 2,100 Mbps loaded throughput
Compatibility	Compatible with existing wideband terminals

ACQUISITION STATUS

Program Status	Concept Design Review (CDR) - 4QFY02; First launch planned for 3QFY07
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WIND CORRECTED MUNITIONS DISPENSER (WCMD) AND WCMD-EXTENDED RANGE (WCMD-ER)

MISSION

Provide accurate dispenser weapon capability when delivered from medium to high altitudes.



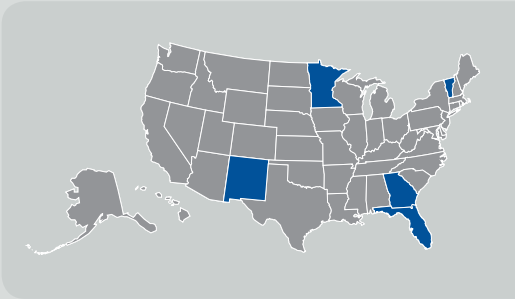
DESCRIPTION

The Wind Corrected Munitions Dispenser (WCMD) is a tail kit for use on inventory cluster weapons such as the Combined Effects Munition (CEM) and the Sensor Fused Weapon (SFW). The CEM is an anti-armor/anti-personnel weapon. The SFW is an anti-armor weapon. Development of the WCMD-Extended Range (ER) began in 2003 to add a wing kit and to integrate GPS into the WCMD-ER wing kit.



CONTRACTORS

Prime: Lockheed Martin (FL, GA)
Subcontractor(s): Honeywell
Military Avionics (MN);
B.F. Goodrich (VT); General
Technology Corporation (NM);
Kurt Manufacturing (MN)



SPECIFICATIONS

Weight	100 lb.
Dimensions	Length: 1.42 ft.; Width: 1.75 ft.; Height: 1.75 ft.
Compatability	CBU-87, CBU-89, and CBU-97

ACQUISITION STATUS

Program Status	Full Rate Production; production ends FY05 for WCMD; WCMD-ER is currently in production through FY07; projected inventory is 31,820 total (24,000 WCMD and 420 WCMD-ER)
Current Inventory	24,000

AIR FORCE DEMOGRAPHICS

AIR FORCE UNITS OF OPERATION

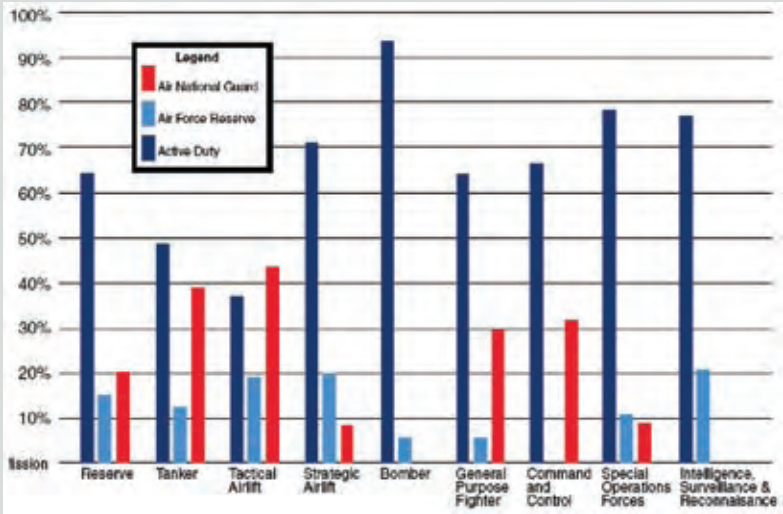
MAJOR COMMANDS/FIELD OPERATING AGENCIES

GLOSSARY OF TERMS/ACRONYMS

SYSTEMS BY CONTRACTOR

SYSTEMS BY STATE

PERCENT OF COMPONENTS PERFORMING VARIOUS MISSIONS

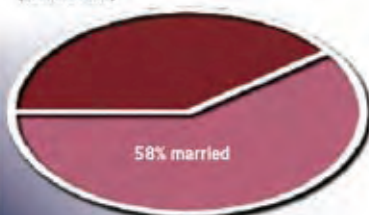


PERSONNEL FACTS

Marital status
(total active force)



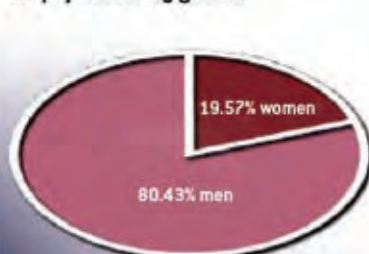
Marital status
(active enlisted)



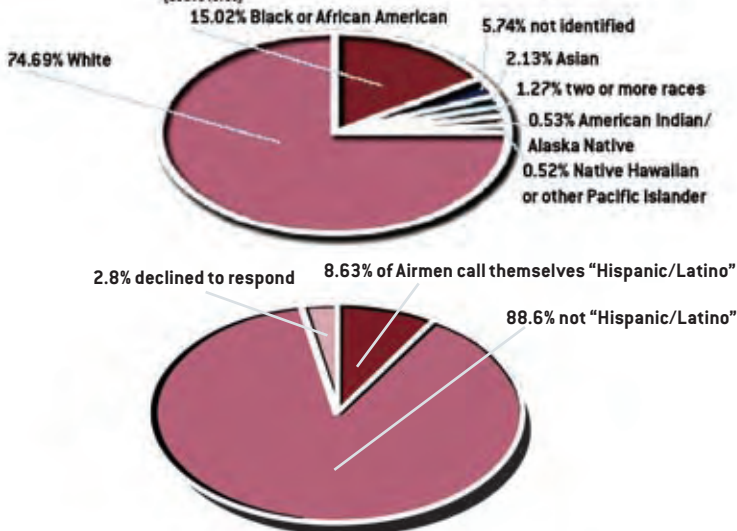
Marital status
(active officers)



AF population by gender



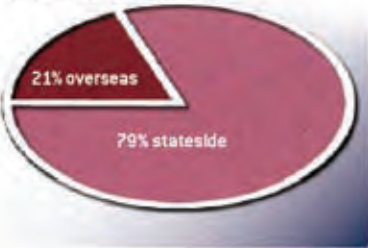
Racial Breakdown
(active force)



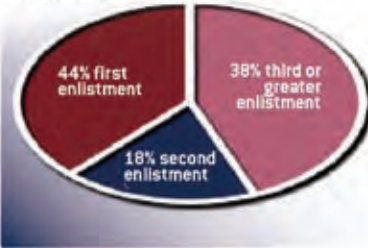
2.8% declined to respond
8.63% of Airmen call themselves "Hispanic/Latino"
88.6% not "Hispanic/Latino"

"Hispanic" or "Latino" is now considered an ethnic, not a racial, category that is registered separately and in addition to the above racial categories.

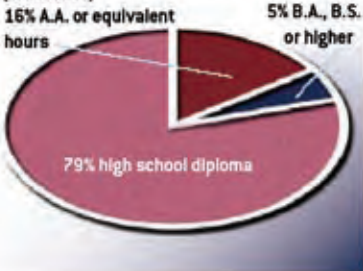
Assignments
(stateside vs. overseas)



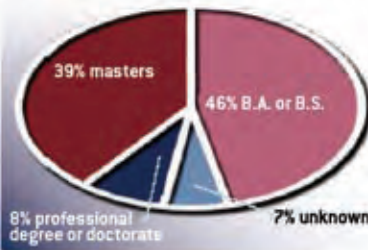
Enlistment levels
(active force)



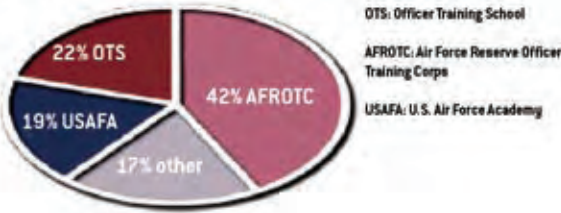
Highest enlisted education attained
(active force)



Highest officer education attained
(active force)



Commissioning source
(active force)



ORGANIZATION OF THE U.S. AIR FORCE

The Department of the Air Force was created with the National Security Act of 1947. It became effective Sept. 18, 1947 and, in 1958, the departments of the Army, Navy, and Air Force were eliminated from the chain of operational command. Commanders of unified and specified commands became responsible to the president and the Secretary of Defense through the Joint Chiefs of Staff.

AIR FORCE MANAGEMENT

The Headquarters of the Air Force incorporates all elements of the U.S. Air Force. It is administered by a civilian Secretary appointed by the President and is supervised by a military Chief of Staff. To ensure unit preparedness and overall effectiveness of the Air Force, the Secretary of the Air Force is responsible for and has the authority to conduct all affairs of the Department of the Air Force.

The Secretary's responsibilities include research and development, and any other activity assigned by the President or the Secretary of Defense. The Secretary of the Air Force exercises authority through civilian assistants and the Chief of Staff, but retains immediate supervision of activities that involve vital relationships with Congress, the Secretary of Defense, other governmental officials, and the public.

THE AIR STAFF

The Chief of Staff, U.S. Air Force, is appointed by the President, with the consent of the Senate, from among Air Force general officers, customarily for a term of four-years. The Chief of Staff serves as a member of the Joint Chiefs of Staff and the Armed Forces Policy Council. In this capacity, the Chief is one of the military advisors to the President, the National Security Council, and the Secretary of Defense. Also, the Chief is the principal advisor to the Secretary of the Air Force on Air Force activities.

The Chief of Staff presides over the Air Staff, transmits Air Staff plans and recommendations to the Secretary of the Air Force, and acts as the Secretary's agent in carrying them out. The Chief is responsible for the efficiency of the Air Force and the preparation of its forces for military operations. The Chief of Staff supervises the administration of Air Force personnel assigned to unified organizations and unified and specified commands. Also, the Chief supervises support of these forces assigned by the Air Force as directed by the Secretary of Defense. In addition, the Chief of Staff has responsibility for activities assigned to the Air Force by the Secretary of Defense.

FIELD ORGANIZATIONS

The Air Force has ten major commands, 30 field operating agencies and five direct reporting units with subordinate elements to carry out its mission. In addition, there are two Reserve components: the Air Force Reserve, which is also a major command, and the Air National Guard.

AIR FORCE UNITS OF OPERATION

Major commands are organized on a functional basis in the United States and on a geographic basis overseas. They accomplish designated phases of Air Force worldwide activities. Also, they organize, administer, equip and train their subordinate elements for the accomplishment of assigned missions. Major commands generally are assigned specific responsibilities based on functions. In descending order of command, elements of major commands include numbered air forces, wings, groups, squadrons, and flights.

THE WING

The basic unit for generating and employing combat capability is the wing. Composite wings operate more than one kind of aircraft, and may be configured as self-contained units designated for quick air intervention anywhere in the world. Other wings continue to operate a single aircraft type ready to join air campaigns anywhere they are needed. Air base and specialized mission wings such as training, intelligence and test also support the Air Force mission.

GROUP

A group is a large Air Force formation usually composed of four or more squadrons and the bases from which they operate.

SQUADRON

A squadron is the basic unit of the Air Force, usually consisting of ten to eighteen aircraft

FLIGHT

The flight is an air force unit that is smaller than a squadron

FIELD OPERATING AGENCIES AND DIRECT REPORTING UNITS

Field operating agencies and direct reporting units are other Air Force subdivisions and report directly to Headquarters U.S. Air Force. They are assigned a specialized mission that is restricted in scope when compared to the mission of a major command. Field operating agencies carry out field activities under the operational control of a Headquarters U.S. Air Force functional manager. Direct reporting units are not under the operational control of a Headquarters U.S. Air Force functional manager because of a unique mission, legal requirements or other factors.

MAJOR COMMANDS

Air Combat Command

Langley AFB, VA
<http://www2.acc.af.mil>

Air Education and Training Command

Randolph AFB, TX
<http://www.aetc.randolph.af.mil>

Civil Air Patrol

Maxwell AFB, AL
<http://www.cap.gov>

Air Force Materiel Command

Wright-Patterson AFB, OH
<http://www.afmc-pub.wpafb.af.mil/>

Air Force Reserve Command

Robins AFB, GA
<http://www.afrc.af.mil>

Air Force Space Command

Peterson AFB, CO
<http://www.peterson.af.mil/hqafspc>

Air Force Special Operations Command

Hurlburt Field, FL
<http://www.afsoc.af.mil>

Air Mobility Command

Scott AFB, IL
<http://public.amc.af.mil/>

Pacific Air Forces

Hickam AFB, HI
<http://www2.hickam.af.mil/pacaf/>

United States Air Forces in Europe

Ramstein AB, Germany
<http://www.usafe.af.mil/>

DIRECT REPORTING UNITS

11th Wing

Bolling AFB, Washington, D.C.
<http://www.bolling.af.mil>

Air Force Doctrine Center

Maxwell AFB, AL
<https://doctrine.af.mil>

Air Force Operational Test and Evaluation Center

Kirtland AFB, NM
<http://www.afotec.af.mil/>

United States Air Force Academy

Colorado Springs, CO
<http://www.usafa.af.mil/>

Air Force Studies and Analyses Center

Washington, D.C.
<https://www.afsaa.hq.af.mil>

FIELD OPERATING AGENCIES

Air Force Agency for Modeling and Simulation

Orlando, FL
<http://www.afams.af.mil>

Air Force Audit Agency

Washington, D.C.
<https://www.afaa.hq.af.mil>

Air Force Center for Environmental Excellence

Brooks City-Base, TX
<http://www/afcee/brooks.af.mil>

Air Force Civil Engineer Support Agency

Tyndall AFB, FL
<http://www.afcesa.af.mil>

Air Force Command and Control & Intelligence, Surveillance and Reconnaissance Center

Langley AFB, VA

<http://www.afc2isrc.af.mil>

Air Force Communications Agency

Scott AFB, IL

<http://public.afca.af.mil>

Air Force Cost Analysis Agency

Arlington, VA

<https://www.my.af.mil>, click on Life: Money

Air Force Flight Standards Agency

Andrews AFB, MD

Air Force Frequency Management Agency

Alexandria, VA

<http://www.affma.hq.af.mil>

Air Force Inspection Agency

Kirtland AFB, NM

<https://www-4afia.kirtland.af.mil>

Air Force Legal Services Agency

Bolling AFB, Washington, D.C.

Air Force Logistics Management Agency

Maxwell AFB Gunter Annex, AL

<http://www.afhma.hq.af.mil>

Air Force Manpower Agency

Randolph AFB, TX

<https://www.afma.randolph.af.mil>

Air Force Medical Operations Agency

Bolling AFB, Washington, D.C.

<https://kx.afms.mil/afmoa>

Air Force Medical Support Agency

Brooks City-Base, TX

<https://kx.afms.mil/hqafmsa>

Air Force National Security Emergency Preparedness Agency

Washington, D.C., and Atlanta, GA

<http://www.afnsep.af.mil>

Air Force News Agency

San Antonio, TX

<http://afnews.af.mil>

Air Force Nuclear Weapons and Counter proliferation Agency

Kirtland AFB, NM

<https://wwwmil.afnwca.kirtland.af.mil>

Air Force Office of Special Investigations

Andrews AFB, MD

<http://public.afosi.amc.af.mil/>

Air Force Pentagon Communications Agency

Washington, D.C.

<https://www.afpac.hq.af.mil>

Air Force Personnel Center

Randolph AFB, TX

<http://www.afpc.randolph.af.mil>

Air Force Personnel Operations Agency

Washington, D.C.

Air Force Program Executive Offices

Wright-Patterson AFB, OH; Hanscom AFB, MA; Eglin AFB, FL; and Washington, D.C.

<https://www.safaq.hq.af.mil>

Air Force Real Property Agency

Arlington, VA

<http://www.afarpa.hq.af.mil>

Air Force Review Boards Agency

Andrews AFB, MD

<https://www.safmr.hq.af.mil/aspz/mrb>

Air Force Safety Center

Kirtland AFB, NM

<http://afsafety.af.mil>**Air Force Security Forces Center**

Lackland AFB, TX

<http://afsf.lackland.af.mil>**Air Force Services Agency**

San Antonio, TX

<http://www.afsv.af.mil>**Air Force Technical Applications Center**

Patrick AFB, FL

<http://aftac.gov>**Air Force Weather Agency**

Offutt AFB, NE

Air National Guard

Lt. Gen. Craig R. McKinley

Arlington, VA

<http://www.ang.af.mil>

AEF - Air and Space Expeditionary Force

AEFC - Air and Space Expeditionary Force Center

AEHF - Advanced Extremely High Frequency

AETF - Air and Space Expeditionary Task Force

AMRAAM - Advanced Medium Range Air-to-Air Missile

AMTI - Air Moving Target Indicator

ALCM - Air-launched Cruise Missile - An air-launched vehicle designed to deliver a nuclear warhead in an air-to-ground mission.

ASOC - Air and Space Operations Center - The senior agency of the Air Force component commander that provides command and control of Air Force air and space operations and coordinates with other components and services. Also called AOC.

CAS - Close Air Support

CBU - Cluster Bomb Unit

CDR - Concept Design Review

CEM - Combined Effects Munition

CNS/ATM - Communication, Navigation and Safety/Air Traffic Management

CSAR - Combat Search and Rescue - Combat search and rescue is how the Air Force accomplishes the personnel recovery task. It is the Air Force's preferred mechanism for personnel recovery execution in uncertain or hostile environments and denied areas.

DT&E - Developmental Test and Evaluation - Any testing used to assist in the development and maturation of products, product elements, or manufacturing or support processes; any engineering-type test used to verify status of technical progress and minimize design risks, substantiate achievement of contract technical performance, and certify readiness for Initial Operational Testing (IOT).

ECM - Electronic Counter Measures

ERP - Enterprise Resource Planning

FFS - Forward Framing Sensor

Force Development - A series of experiences and challenges, combined with education and training opportunities, that is directed at producing Airmen who possess the requisite skills, knowledge, experience, and motivation to lead and execute the full spectrum of Air Force missions.

Force Protection - Actions taken to prevent or mitigate hostile actions against Department of Defense personnel (including family members), resources, facilities, and critical information.

FRP - Full Rate Production - Contracting for economic production quantities following stabilization of the system design and validation of the production process.

FYDP - Future Years Defense Program - A massive DoD database and internal accounting system that summarizes forces and resources associated with programs approved by the Secretary of Defense.

GIG - Global Information Grid - The globally interconnected, end-to-end set of information capabilities, associated processes, and personnel for collecting, processing, storing, disseminating, and managing information on demand to warfighters, policy makers, and support personnel.

Global Mobility - The capability to move people and equipment across the world quickly, ensuring the right force anywhere, at any time.

GMTI - Ground Moving Target Indicator

IMINT - Imagery Intelligence

INS/GPS - Inertial Navigation System/Global Positioning System

IOT - Initial Operational Testing

ISR - Intelligence, Surveillance, and Reconnaissance - Integrated capabilities to collect, process, exploit and disseminate accurate and timely information that provides the battlespace awareness necessary to successfully plan and conduct operations.

JAOC - Joint Air Operations Center - A jointly staffed facility established for planning, directing, and executing joint air operations in support of the joint force commander's operation or campaign objectives. Also called Combined Air Operations Center (CAOC).

JCOMs - Joint Commands

JDAM - Joint Direct Attack Munition

JFACC - Joint Force Air Component Commander - The commander within a unified command, subordinate unified command, or joint task force responsible to the establishing commander for making recommendations on the proper employment of air forces; planning and coordinating air operations; or accomplishing such operational missions as may be assigned. The joint force air component commander is given the authority necessary to accomplish missions and tasks assigned by the establishing commander.

LANTIRN - Low-Altitude Navigation and Targeting Infrared for Night

LOS - Line of Sight

LRIP - Low Rate Initial Production - The first effort of the Production and Deployment (P&D) phase. The purpose of this effort is to establish an initial production base for the system, permit an orderly ramp-up sufficient to lead to a smooth transition to Full Rate Production (FRP), and to provide production representative articles for Initial Operational Test and Evaluation (IOT&E) and full-up live fire testing. This effort concludes with a Full Rate Production Decision Review (FRPDR) to authorize the Full Rate Production and Deployment (FRP&D) effort.

MANPADS - Man Portable Air Defense Systems

MASINT - Measurement and Signature Intelligence

MS Milestone - The point at which a recommendation is made and approval sought regarding starting or continuing an acquisition program, e.g., proceeding to the next phase. Milestones established by DoDI 5000.2 include the following:

- MS A approves entry into the Technology Development (TD) phase;
- MS B approves entry into the System Development and Demonstration (SDD) phase; and
- MS C approves entry into the Production and Deployment (P&D) phase.

Also of note are the Concept Decision (CD) that approves entry into the Concept Refinement (CR) phase; the Design Readiness Review (DRR) that ends the System Integration (SI) effort and continues the SDD phase into the System Demonstration (SD) effort; and the Full Rate Production Decision Review (FRPDR) at the end of the Low Rate Initial Production (LRIP) effort of the P&D phase that authorizes Full Rate Production (FRP) and approves deployment of the system to the field or fleet.

Operationally Response Space - The ability to rapidly deploy and employ communication, ISR, and other space capabilities.

OT&E Operational Test and Evaluation - The field test, under realistic conditions, of any item (or key component) of weapons, equipment, or munitions for the purpose of determining the effectiveness and suitability of the weapons, equipment, or munitions for use in combat by typical military users. It includes the evaluation of the results of such tests.

P3I Preplanned Product Improvement - Planned future improvement of developmental systems for which design considerations are effected during development to enhance future application of projected technology. It includes improvements planned for ongoing systems that go beyond the current performance envelope to achieve a needed operational capability.

Persistent C4ISR - The successful use of Command, Control, Communications, Computers, Intelligence, Surveillance, Reconnaissance (C4ISR), to ensure the ability to see first, think first, and act first in the battle space.

PLS - Personnel Locator System

PDR Preliminary Design Review - A multi-disciplined technical review to ensure that a system is ready to proceed into detailed design and can meet stated performance requirements within cost (program budget), schedule (program schedule), risk, and other system constraints.

RAIDRS - Rapid Attack Identification Detection and Reporting System

Rapid Strike - The Air Force's ability to control air and space to deliver a precise, tailored effect anywhere, at any time.

Research, Development, Test and Evaluation (RDT&E) - Activities for the development of a new system or to expand the performance of fielded systems.

RPA - Remotely Piloted Aircraft, i.e., Global Hawk

SAR - Synthetic Aperture Radar

S&T Science and Technology Program - Consists of projects in basic research, applied research, and Advanced Technology Development (ATD).

SD - System Demonstration - The second effort of the System Development and Demonstration (SDD) phase. A program enters SD after the Program Manager (PM) has demonstrated the system in prototype articles or Engineering Development Models (EDMs). The effort is intended to demonstrate the ability of the system to operate in a useful way consistent with the approved Key Performance Parameters (KPPs). This effort ends when the system is demonstrated in its intended environment using the selected prototype; meets approved requirements; industrial capabilities are reasonably available; and the system meets or exceeds exit criteria and Milestone C entrance requirements.

SDB - Small Diameter Bomb

SDD - System Development and Demonstration

SEAD/DEAD - Suppression/Destruction of Enemy Air Defenses

SMTI - Surface Moving Target Indication

Sustainment - Execute support program to meet operational support performance requirements and sustain systems in the most cost-effective manner over its life cycle. Includes supply, maintenance, transportation, sustaining engineering, data management, Configuration Management (CM), manpower, personnel, training, habitability, survivability, environment, safety (including explosives safety), occu-

pational health, protection of critical program information, anti-tamper provisions, Information Technology (IT) (including National Security Systems (NSSs)), supportability, and interoperability functions.

System Development and Demonstration (SDD) - The third phase of a system life cycle. This phase consists of two efforts, System Integration (SI) and System Demonstration (SD), and begins after Milestone B. It also contains a Design Readiness Review (DRR) at the conclusion of the SI effort.

System Requirements Review (SRR) - A review conducted to ascertain progress in defining system technical requirements. This review determines the direction and progress of the systems engineering effort and the degree of convergence upon a balanced and complete configuration.

TARS - Theater Airborne Reconnaissance System

T&E Test and Evaluation - Process by which a system or components are exercised and results analyzed to provide performance-related information. The information has many uses including risk identification and risk mitigation and empirical data to validate models and simulations. T&E enables an assessment of the attainment of technical performance, specifications, and system maturity to determine whether systems are operationally effective, suitable and survivable for intended use, and/or lethal.

Threat - The sum of the potential strengths, capabilities, and strategic objectives of any adversary that can limit or negate U.S. mission accomplishment or reduce force, system, or equipment effectiveness.

UAV - Unmanned Aerial Vehicle

UCAV - Unmanned Combat Aerial Vehicle

WMD - Weapons of Mass Destruction

ADC

Launch & Test Range System (LTRS)

AeroAstro

Space Test Program (STP)

Aerojet

CBU-89 Gator

Evolved Expendable Launch Vehicle (EELV)

LGM-30G Minuteman III

Medium Launch Vehicle (MLV)

Rocket Systems Launch Program (RSLP)

Aerospace Integration Corporation

UH-1N Helicopter (Variants: UH-1N, 1H/Vm UV-18B)

AeroThrust

C-9C

Air Launch

Operationally Responsive Space

Alcatel

Launch & Test Range System (LTRS)

Alliant Techsystems

AGM-65 Maverick

CBU-87 Combined Effects Munition (CEM)

CBU-89 Gator

LGM-30G Minuteman III

Sensor Fused Weapon (SFW)

Allied Signal Aerospace

Evolved Expendable Launch Vehicle (EELV)

ARINC

KC-10 Extender

Arrowhead Products

Evolved Expendable Launch Vehicle (EELV)

ASR

Launch & Test Range System (LTRS)

ATK Aerospace

Rocket Systems Launch Program (RSLP)

ATK Mission Research

C-130H Scathe View

RC-26B

Aurora

RQ-4A/B Global Hawk

BAE

Air Force Combat Identification (AF CID)

Air Force Distributed Common Ground System (AF DCGS)

EC-130H Compass Call

F16-TARS (Theater Airborne Reconnaissance System)

F-35 Joint Strike Fighter

Military Satellite Communication (MILSATCOM) Terminals

U-2S Dragon Lady

Ball Aerospace

National Polar-orbiting Operational Environmental Satellite System (NPOESS)

Space Situation Awareness Network

BEA Web Logic

Air Force Distributed Common Ground System (AF DCGS)

Bell-Boeing

CV-22B

Bell Helicopter Company

UH-1N Helicopter (Variants: UH-1N, 1H/Vm UV-18B)

BF Goodrich

Evolved Expendable Launch Vehicle (EELV)

Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

U-2S Dragon Lady

Boeing

AC-130H Spectre

AC-130U Spooky

AGM-130 Standoff Attack Weapon

AGM-86B Air Launched Cruise Missile (ALCM)

Airborne Laser (ABL)

Combatant Commanders' Integrated Command and Control System (CCIC2S)

Evolved Expendable Launch Vehicle (EELV)

E-10A

F-22A Raptor

GBU-31/32/38 Joint Direct Attack Munition (JDAM)

GBU-39/B Small Diameter Bomb (SDB)

Global Positioning System (GPS)

Launch & Test Range System (LTRS)

KC-10 Extender

KC-135 Stratotanker

LGM-30G Minuteman

MC-130E Combat Talon

MC-130H Combat Talon II

MC-130P Combat Shadow
 Military Satellite Communication (MILSATCOM) Terminals
 RC-135S Cobra Ball
 RC-135U Combat Sent
 RC-135V/W Rivet Joint
 Space Radar (SR)
 Space Situation Awareness Network
 Space Test Program (STP)
 T-38A/AT-38B/T-38C Talon
 T-43A
 Transformational Satellite (TSAT) Communications System
 WC-135 Constant Phoenix

Boeing Aerospace Company

E-3 Airborne Warning and Control System (AWACS)
 Medium Launch Vehicle (MLV)

Boeing Aerospace Operations

E-RB National Airborne Operations Center (NAOC)

Boeing Aircraft

B-52H Stratofortress
 F-15A-D Eagle
 F-15E Strike Eagle

Boeing Integrated Defense System

VC-25A

Boeing North American

B-1B Lancer

Boeing Satellite Systems

National Polar-orbiting Operational Environmental Satellite System (NPOESS)
 Wideband Gapfiller System (WGS)

Boeing/VSI

Joint Helmet Mounted Cueing System (JHMCS)

Boeing Wichita Development and Modernization Center

E-4B National Airborne Operations Center (NAOC)

Booz Allen Hamilton

Transformational Satellite (TSAT) Communications System

Carbon Advanced Technologies, Inc.

Hypersonic Technology Vehicle (HTV)

CDI Corp

Launch & Test Range System (LTRS)

Cessna

T-37B Tweet

CFM International

C-40B/C

Cincinnati Electronics

Evolved Expendable Launch Vehicle (EELV)

Coleman Research

Rocket Systems Launch Program (RSLP)

Computer Sciences Corporation

Combatant Commanders Integrated Command and Control System (CCIC2S)

Computer Sciences Corporation/APD

C-21A

Computer Sciences Corporation/Raytheon

Launch & Test Range System (LTRS)

Contraves

Launch & Test Range System (LTRS)

Evolved Expendable Launch Vehicle (EELV)

Dallas Airmotive

C-20B/H

C-21A

DCS Corp

Launch & Test Range System (LTRS)

Delta Velocity Corporation

Operationally Responsive Space

Digital Net

Combatant Commanders Integrated Command and Control System (CCIC2S)

Dolphin

Launch & Test Range System (LTRS)

EJM

MH-53J/M Pave Low III/IV

ENSCO

Launch & Test Range System (LTRS)

E-Spectrum

AGM-86B Air Launched Cruise Missile (ALCM)

AGM-129A Advanced Cruise Missile (ACM)

Excel

Launch & Test Range System (LTRS)

Fiber Innovations

Joint Air-to-Surface Standoff Missile (JASSM)

Freescal Semiconductor

Launch & Test Range System (LTRS)

GDE Systems

Evolved Expendable Launch Vehicle (EELV)

General Atomic ASI

MQ-1 Predator

MQ-9 Predator B

General Dynamics

AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)

EC-130H Compass Call

Sensor Fused Weapon (SFW)

General Electric

A-10/OA-10 Thunderbolt II

B-1B Lancer

C-5 Galaxy

F-16 Fighting Falcon

F-117 Nighthawk

KC-10 Extender

KC-135 Stratotanker

RC-135S Cobra Ball

RC-135U Combat Sent

RC-135V/W Rivet Joint

T-38A/AT-38B/T-38C Talon

U-2S Dragon Lady

General Electric/Rolls-Royce Fighter Engine Team

F-35 Joint Strike Fighter

General Technology Corporation

Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

GKN Aerospace

C-130J

Goodrich

AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)

C-5 Galaxy

Gulfstream

C-37A

Harris Corporation

Counterspace Systems

Global Positioning System (GPS)

Military Satellite Communication (MILSATCOM) Terminals

WC-135 Constant Phoenix

Hi Shear Corporation

Sensor Fused Weapon (SFW)

HMX

Operationally Responsive Space

Honeywell

B-52H Stratofortress

C-5 Galaxy

CBU-87 Combined Effects Munition (CEM)

CBU-89 Gator

Evolved Expendable Launch Vehicle (EELV)

F-15A-D Eagle

F-15E Strike Eagle

GBU-31/32/38 Joint Direct Attack Munition (JDAM)

Joint Air-to-Surface Standoff Missile (JASSM)

LGM-30G Minuteman III

Medium Launch Vehicle (MLV)

Honeywell Aerospace Electronic Systems

T-6A Texan II

Honeywell International, Inc.

F-16 Fighting Falcon

Honeywell Military Avionics

Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

Honeywell Technical Services, Inc.

Air Force Satellite Control Network

Hughes Space & Communications

Launch & Test Range System (LTRS)

InDyne, Inc

Launch & Test Range System (LTRS)

Innovative Solutions Consulting

Control and Reporting Center (CRC)

Integral Systems, Inc.

Counterspace Systems

Defense Meteorological Satellite Program (DMSP)

Integrated Systems

C-130H Scathe View

Interstate Electronics Corp.

Combat Survivor Evader Locator (CSEL)

Israel Aircraft Industries

F-16 Fighting Falcon

ITT Industries

CV-22B

Launch & Test Range System (LTRS)

National Polar-orbiting Operational Environmental Satellite System (NPOESS)

Space Situation Awareness Network

Johns Hopkins Applied Physics Laboratory/Boeing**Kaiser Electronics**

Joint Helmet Mounted Cueing System (JHMCS)

KAMAG

Evolved Expendable Launch Vehicle (EELV)

Keystone Engineering, Inc.

Evolved Expendable Launch Vehicle (EELV)

Klune

Joint Air-to-Surface Standoff Missile (JASSM)

Kodak

AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)

KSS (Kelly's Logistics Support Services) Scitor

Launch & Test Range System (LTRS)

Kurt Manufacturing

Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

Sensor Fused Weapon (SFW)

LaBarge, Inc.

Evolved Expendable Launch Vehicle (EELV)

L-3 Communications

AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)

C-12C/D/F/J

C-130 Senior Scout

E-4B National Airborne Operations Center (NAOC)

E-10A

EC-130H Compass Call

F16-TARS (Theater Airborne Reconnaissance System)

F-117 Nighthawk

Launch & Test Range System (LTRS)
Military Satellite Communication (MILSATCOM) Terminals
MQ-1 Predator
MQ-9 Predator B
U-2S Dragon Lady
RC-135S Cobra Ball
RC-135U Combat Sent
RC-135V/W Rivet Joint
WC-135 Constant Phoenix

L-3 Telemetry

Joint Air-to-Surface Standoff Missile (JASSM)

Lockheed Martin

AC-130H Spectre
Advanced Extremely High Frequency (AEHF)
Airborne Laser (ABL)
AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
C-5 Galaxy
C-9C
C-130 Hercules
C-130 Senior Scout
C-130J
Defense Meteorological Satellite Program (DMSP)
Evolved Expendable Launch Vehicle (EELV)
F-16 Fighting Falcon
F-22A Raptor
F-35 Joint Strike Fighter
F-117 Nighthawk
GBU-31/32/38 Joint Direct Attack Munition (JDAM)
Global Positioning System (GPS)
HC-130P/N King
Hypersonic Technology Vehicle (HTV)
Joint Air-to-Surface Standoff Missile (JASSM)
Launch & Test Range System (LTRS)
LGM-30G Minuteman III
MC-130E Combat Talon
MC-130H Combat Talon II
MC-130P Combat Shadow
MH-53J/M Pave Low III/IV
Military Satellite Communication (MILSATCOM) Terminals
Rocket Systems Launch Program (RSLP)
Space Radar (SR)
Transformational Satellite (TSAT) Communications System
U-2S Dragon Lady
Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

Lockheed Martin Missiles and Space

Defense Satellite Communications System (DSCS) III
Military Strategic and Tactical Relay (Milstar)

Lockheed Martin Mission Systems

Air Force Satellite Control Network

Lockheed Martin Space Systems

Space Based Infrared System High (SBIRS High)

Lockheed Martin Systems Integration

A-10/OA-10 Thunderbolt II

Lockheed Martin Tactical Aircraft Systems

Launch & Test Range System (LTRS)

Lockheed Martin Technical Operations

Launch & Test Range System (LTRS)

M7 Aerospace

C-20B/H
RC-26B

Martin Baker Aircraft

T-6A Texan II
T-38A/AT-38B/T-38C Talon

Marvin Engineering

AGM-65 Maverick

MIT Lincoln Laboratory

Space Situation Awareness Network

Mitsubishi Heavy Industries

Evolved Expendable Launch Vehicle (EELV)

Moog Inc.

AGM-65 Maverick
Evolved Expendable Launch Vehicle (EELV)

Muniz Engineering

Space Test Program (STP)

Net Acquire

Launch & Test Range System (LTRS)

Northrop Grumman

A-10/OA-10 Thunderbolt II

Air Force Combat Identification (AF CID)

Airborne Laser (ABL)

B-1B Lancer

Combatant Commanders Integrated Command and Control System (CCIC2S)

E-8C Joint Stars

E-10A

F-15A-D Eagle

F-16 Fighting Falcon

F-22A Raptor

F-35 Joint Strike Fighter

Military Satellite Communication (MILSATCOM) Terminals

RQ-4A/B Global Hawk

Space Situation Awareness Network

Transformational Satellite (TSAT) Communications System

U-2S Dragon Lady

Northrop Grumman Electronic Systems

Space Based Infrared System High (SBIRS High)

Space Radar (SR)

Northrop Grumman Mission Systems

LGM-30G Minuteman III

Northrop Grumman Space Technology

National Polar-orbiting Operational Environmental Satellite System (NPOESS)

Space Radar (SR)

NPO Energomash

Evolved Expendable Launch Vehicle (EELV)

Olan

CBU-89 Gator

Orion Propulsion

Operationally Responsive Space

Pacific Scientific

Sensor Fused Weapon (SFW)

PEMCO

KC-135 Stratotanker

Pioneer Aerospace

Sensor Fused Weapon (SFW)

Pratt & Whitney

B-52H Stratofortress

C-12C/D/F/J

C-17 Globemaster III

C-32A

F-15A-D Eagle

F-15E Strike Eagle

F-16 Fighting Falcon

F-22A Raptor

F-35 Joint Strike Fighter

KC-135 Stratotanker

Pratt & Whitney Canada

T-6A Texan II

Raytheon

AIM-7M Sparrow

AIM-9M Sidewinder

AIM-9X Sidewinder

AGM-65 Maverick

AGM-88 High Speed Anti-Radiation Missile (HARM)

AIM-120 (AMRAAM) Advanced Medium Range Air-to-Air Missile

AGM-129A Advanced Cruise Missile (ACM)

Air Force Combat Identification (AF CID)

Control and Reporting Center (CRC)

CV-22B

Defense Meteorological Satellite Program (DMSP)

E-4B National Airborne Operations Center (NAOC)

E-10A

EC-130H Compass Call

F-15A-D Eagle

F-15E Strike Eagle

F-16 Fighting Falcon

F-16 HARM Targeting System (HTS) R6 and R7

LGM-30G Minuteman III

MC-130E Combat Talon

MH-53J/M Pave Low III/IV

Military Satellite Communication (MILSATCOM) Terminals

MQ-1 Predator

MQ-9 Predator B

National Polar-orbiting Operational Environmental Satellite System (NPOESS)

RQ-4A/B Global Hawk

T-1A Jayhawk

T-6A Texan II

Transformational Satellite (TSAT) Communications System

U-2S Dragon Lady

WC-135 Constant Phoenix

Raytheon Intelligence & Information Systems

Global Broadcast Service (GBS)

Raytheon Missile Systems

F-16 HARM Targeting System (HTS) R6 and R7

Raytheon Technology Services

Global Broadcast Service (GBS)

Raytheon-Texas Instruments

F-117 Nighthawk

Reynard Corp

Sensor Fused Weapon (SFW)

Robinson & Robinson

Launch & Test Range System (LTRS)

Rocketdyne

Medium Launch Vehicle (MLV)

Rockwell Automation

E-4B National Airborne Operations Center (NAOC)

Rockwell Collins

AC-130H Spectre

KC-135 Stratotanker

MC-130E Combat Talon

MC-130H Combat Talon II

MC-130P Combat Shadow

Rolls Royce

C-20B/H

C-37A

C-130J

CV-22B

RQ-4A/B Global Hawk

RT Logic

Launch & Test Range System (LTRS)

SEI

AC-130H Spectre

AC-130U Spooky

MC-130H Combat Talon II

Senior Systems Technology

Combat Survivor Evader Locator (CSEL)

Sierra Nevada Corporation

RC-135U Combat Sent

Sierra Nevada Corporation (Plano Microwave, Inc.)

C-130 Senior Scout

Sikorsky

HH-60G Pave Hawk

MH-53J/M Pave Low III/IV

Smith Aerospace

C-130J

Smiths Aerospace Electronic Systems

T-6A Texan II

Smith Electric

Launch & Test Range System (LTRS)

Space Vector Corp.

Operationally Responsive Space

Space-X

Rocket Systems Launch Program (RSLP)

Spectrum Astro

Space Test Program (STP)

SRI International

Launch & Test Range System (LTRS)

Superior

Launch & Test Range System (LTRS)

Teledyne Continental Engine

Joint Air-to-Surface Standoff Missile (JASSM)

Textron Systems Corporation

GBU-31/32/38 Joint Direct Attack Munition (JDAM)

Sensor Fused Weapon (SFW)

Thales Communications

Combat Survivor Evader Locator (CSEL)

Thales Raytheon

Control and Reporting Center (CRC)

Thiokol

Medium Launch Vehicle (MLV)

TRAK Microwave

Launch & Test Range System (LTRS)

Tundra Semiconductor

Sensor Fused Weapon (SFW)

United Engineering Co.

Evolved Expendable Launch Vehicle (EELV)

Universal Space Lines LLC

Operationally Responsive Space

Vertex Aerospace

C-12C/D/F/J

ViaSat

Military Satellite Communication (MILSATCOM) Terminals

Volt

Launch & Test Range System (LTRS)

Vought Aircraft Industries

C-17 Globemaster III

RQ-4A/B Global Hawk

Williams International

Joint Air-to-Surface Standoff Missile (JASSM)

Wyman - Gordon

Joint Air-to-Surface Standoff Missile (JASSM)

Alabama

C-5 Galaxy
 Evolved Expendable Launch Vehicle (EELV)
 Joint Air-to-Surface Standoff Missile (JASSM)
 KC-135 Stratotanker
 Operationally Responsive Space

Arizona

AGM-65 Maverick
 AGM-88 High Speed Anti-Radiation Missile (HARM)
 AGM-129A Advanced Cruise Missile (ACM)
 AIM-7M Sparrow
 AIM-9M Sidewinder
 AIM-9X Sidewinder
 AIM-120 (AMRAAM) Advanced Medium Range Air-to-Air Missile
 AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
 Evolved Expendable Launch Vehicle (EELV)
 F-16 HARM Targeting System (HTS) R6 and R7

Arkansas

Evolved Expendable Launch Vehicle (EELV)

California

Advanced Extremely High Frequency (AEHF) System
 AGM-130 Standoff Attack Weapon
 Air Force Combat Identification (AF CID)
 Airborne Laser (ABL)
 AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
 B-1B Lancer
 B-2 Spirit
 C-17 Globemaster III
 CBU-89 Gator
 Combatant Commanders Integrated Command and Control System (CCIC2S)
 Combat Survivor Evader Locator (CSEL)
 Control and Reporting Center (CRC)
 Defense Meteorological Satellite Program (DMSP)
 E-10A
 EC-130H Compass Call
 Evolved Expendable Launch Vehicle (EELV)
 F-15A-D Eagle
 F-15E Strike Eagle
 F-16 Fighting Falcon
 F-35 Joint Strike Fighter
 F-117 Nighthawk
 Global Positioning System (GPS)
 Hypersonic Technology Vehicle (HTV)
 Joint Helmet Mounted Cueing System (JHMCS)
 KC-10 Extender
 Launch & Test Range System (LTRS)

LGM-30G Minuteman III
National Polar-orbiting Operational Environmental Satellite System (NPOESS)
Operationally Responsive Space
Medium Launch Vehicle (MLV)
Military Satellite Communication (MILSATCOM) Terminals
MQ-1B Predator
MQ-9 Predator B
Operationally Responsive Space
Rocket Systems Launch Program (RSLP)
RQ-4A/B Global Hawk
Sensor Fused Weapon (SFW)
Space Based Infrared System High (SBIRS High)
Space Radar (SR)
Space Situation Awareness Network
T-38A/AT-38B/T-38C Talon
Transformational Satellite (TSAT) Communications System
U-2S Dragon Lady
Wideband Gapfiller System (WGS)

Colorado

Air Force Satellite Control Network
AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
C-17 Globemaster III
C-130 Senior Scout
Combatant Commanders Integrated Command and Control System (CCIC2S)
Defense Meteorological Satellite Program (DMSP)
Evolved Expendable Launch Vehicle (EELV)
Launch & Test Range System (LTRS)
Medium Launch Vehicle (MLV)
National Polar-orbiting Operational Environmental Satellite System (NPOESS)
Rocket Systems Launch Program (RSLP)
Space Radar (SR)
Space Situation Awareness Network
Transformational Satellite (TSAT) Communications System

Connecticut

C-17 Globemaster III
E-4B National Airborne Operations Center (NAOC)
F-15A-D Eagle
F-15E Strike Eagle
F-16 Fighting Falcon
F-22A Raptor
F-35 Joint Strike Fighter
HH-60G Pave Hawk
MH-53J/M Pave Low III/IV
Sensor Fused Weapon (SFW)
WC-135 Constant Phoenix

Florida

AC-130H Spectre
 AC-130U Spooky
 AIM-7M Sparrow
 AIM-9M Sidewinder
 B-52H Stratofortress
 C-9C
 CBU-89 Gator
 Counterspace Systems
 E-4B National Airborne Operations Center (NAOC)
 E-8C Joint STARS
 E-10A
 Evolved Expendable Launch Vehicle (EELV)
 Global Positioning System (GPS)
 Joint Air-to-Surface Standoff Missile (JASSM)
 Launch & Test Range System (LTRS)
 LGM-30G Minuteman III
 MC-130E Combat Talon
 MC-130H Combat Talon II
 MC-130P Combat Shadow
 Medium Launch Vehicle (MLV)
 MH-53J/M Pave Low III/IV
 Military Satellite Communication (MILSATCOM) Terminals
 Rocket Systems Launch Program (RSLP)
 Space Test Program (STP)
 UH-1N Helicopter (Variants: UH-1N, 1H/Vm UV-18B)

Georgia

C-5 Galaxy
 C-37A
 C-130J
 F-22A Raptor
 MH-53J/M Pave Low III/IV
 U-2S Dragon Lady

Illinois

F-15A-D Eagle
 F-15E Strike Eagle

Indiana

C-130J
 CV-22B
 EC-130H Compass Call
 F-35 Joint Strike Fighter
 National Polar-orbiting Operational Environmental Satellite System (NPOESS)
 RQ-4A/B Global Hawk

Iowa

AC-130H Spectre
AC-130U Spooky
GBU-31/32/38 Joint Direct Attack Munition (JDAM)
MC-130E Combat Talon
MC-130H Combat Talon II
MC-130P Combat Shadow
Military Satellite Communication (MILSATCOM) Terminals

Kansas

Airborne Laser (ABL)
B-52H Stratofortress
E-4B National Airborne Operations Center (NAOC)
KC-135 Stratotanker
Launch & Test Range System (LTRS)
T-6A Texan II

Louisiana

E-8C Joint STARS
Evolved Expendable Launch Vehicle (EELV)

Maine

Sensor Fused Weapon (SFW)

Maryland

Air Force Combat Identification (AF CID)
AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
B-1B Lancer
C-5 Galaxy
C-130 Hercules
Combat Survivor Evader Locator (CSEL)
Counterspace Systems
Defense Meteorological Satellite Program (DMSP)
E-3 Airborne Warning and Control System (AWACS)
F-16 Fighting Falcon
F-22A Raptor
Global Broadcast Service (GBS)
Space Radar (SR)

Massachusetts

A-10/OA-10 Thunderbolt II
AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
F-117 Nighthawk
GBU-31/32/38 Joint Direct Attack Munition (JDAM)
Global Broadcast Service (GBS)
Joint Air-to-Surface Standoff Missile (JASSM)
LGM-30G Minuteman III
Sensor Fused Weapon (SFW)
Space Situation Awareness Network
T-38A/AT-38B/T-38C Talon

Michigan

Joint Air-to-Surface Standoff Missile (JASSM)

Minnesota

CBU-87 Combined Effects Munition (CEM)

CBU-89 Gator

F-16 Fighting Falcon

GBU-31/32/38 Joint Direct Attack Munition (JDAM)

Launch & Test Range System (LTRS)

Sensor Fused Weapon (SFW)

Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

Mississippi

C-12C/D/F/J

F-15E Strike Eagle

Missouri

AC-130H Spectre

AC-130U Spooky

AGM-86C/D Conventional Air Launched Cruise Missile (CALCM)

C-17 Globemaster III

C-32A

Evolved Expendable Launch Vehicle (EELV)

F-15A-D Eagle

F-15E Strike Eagle

GBU-31/32/38 Joint Direct Attack Munition (JDAM)

GBU-39/B Small Diameter Bomb (SDB)

T-38A/AT-38B/T-38C Talon

Nebraska

Evolved Expendable Launch Vehicle (EELV)

Nevada

C-130 Senior Scout

Operationally Responsive Space

RC-135U Combat Sent

New Hampshire

EC-130H Compass Call

Military Satellite Communication (MILSATCOM) Terminals

New Jersey

B-52H Stratofortress

CV-22B

F-16 Fighting Falcon

GBU-31/32/38 Joint Direct Attack Munition (JDAM)

New Mexico

C-5 Galaxy

Evolved Expendable Launch Vehicle (EELV)

F-15A-D Eagle

F-15E Strike Eagle
F-16 Fighting Falcon
Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

New York

A-10/OA-10 Thunderbolt II
Air Force Combat Identification (AF CID)
AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
Evolved Expendable Launch Vehicle (EELV)
F16-TARS (Theater Airborne Reconnaissance System)
Launch & Test Range System (LTRS)

North Carolina

C-5 Galaxy

North Dakota

C-5 Galaxy

Ohio

B-1B Lancer
Evolved Expendable Launch Vehicle (EELV)
F-16 Fighting Falcon
F-35 Joint Strike Fighter
Joint Air-to-Surface Standoff Missile (JASSM)
LGM-30G Minuteman III
RC-135S Cobra Ball
RC-135U Combat Sent
U-2S Dragon Lady

Oklahoma

E-4B National Airborne Operations Center (NAOC)
KC-10 Extender
KC-135 Stratotanker
VC-25A

Pennsylvania

CV-22B
Global Positioning System (GPS)
Hypersonic Technology Vehicle (HTV)
Joint Air-to-Surface Standoff Missile (JASSM)
Launch & Test Range System (LTRS)
LGM-30G Minuteman III

South Carolina

C-9C
HC-130P/N King
MC-130E Combat Talon
MC-130H Combat Talon II
MC-130P Combat Shadow

Texas

AGM-65 Maverick
 AGM-86B Air Launched Cruise Missile (ALCM)
 AGM-129A Advanced Cruise Missile (ACM)
 AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
 C-17 Globemaster III
 C-20B/H
 C-21A
 C-130 Senior Scout
 CV-22B
 E-4B National Airborne Operations Center (NAOC)
 E-10A
 EC-130H Compass Call
 Evolved Expendable Launch Vehicle (EELV)
 F-16 Fighting Falcon
 F-22A Raptor
 F-35 Joint Strike Fighter
 F-117 Nighthawk
 Hypersonic Technology Vehicle (HTV)
 Joint Air-to-Surface Standoff Missile (JASSM)
 KC-10 Extender
 KC-135 Stratotanker
 Launch & Test Range System (LTRS)
 MC-130E Combat Talon
 MH-53J/M Pave Low III/IV
 MQ-1B Predator
 MQ-9 Predator B
 RC-26B
 RC-135S Cobra Ball
 RC-135U Combat Sent
 RC-135V/W Rivet Joint
 RQ-4A/B Global Hawk
 Scathe View
 Space Test Program (STP)
 UH-1N Helicopter (Variants: UH-1N, 1H/Vm UV-18B)
 WC-135 Constant Phoenix

Utah

AGM-65 Maverick
 AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)
 C-130 Senior Scout
 F16-TARS (Theater Airborne Reconnaissance System)
 Joint Air-to-Surface Standoff Missile (JASSM)
 LGM-30G Minuteman III
 Medium Launch Vehicle (MLV)
 Military Satellite Communication (MILSATCOM) Terminals
 MQ-1B Predator
 MQ-9 Predator B

SYSTEMS BY STATE

Rocket Systems Launch Program (RSLP)

RQ-4A/B Global Hawk

U-2S Dragon Lady

Vermont

U-2S Dragon Lady

Wind Corrected Munitions Dispenser (WCMD) and WCMD-Extended Range (WCMD-ER)

Virginia

AN/GSQ-272 Air Force Distributed Common Ground System (AF DCGS)

Combatant Commanders Integrated Command and Control System (CCIC2S)

Global Broadcast Service (GBS)

LGM-30G Minuteman III

Operationally Responsive Space

RQ-4A/B Global Hawk

Space Test Program (STP)

Transformational Satellite (TSAT) Communications System

U-2S Dragon Lady

Washington

AGM-86B Air Launched Cruise Missile (ALCM)

C-32A

C-40B/C

E-3 Airborne Warning and Control System (AWACS)

E-10A

F-22A Raptor

Launch & Test Range System (LTRS)

Operationally Responsive Space

Sensor Fused Weapon (SFW)

T-43A

WC-135 Constant Phoenix

West Virginia

C-12C/D/F/J

Sensor Fused Weapon (SFW)

T-6A Texan II

Wisconsin

Sensor Fused Weapon (SFW)